SOCIOLOGICAL BASES OF INDUSTRIAL ARTS FOR SECONDARY SCHOOLS

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CHAPTER I

POINT OF VIEW

Industry is an integral part of the sociological structure of the United States and a dynamic force in the creation and development of its culture. Industry is a social institution which evolved from manifold conditions, influences, and decisions within the Western world. It was the social instrument through which Western society moved from a static agricultural economy to a dynamic material one. Long before Adam Smith, the seeds of the modern industrial economy had been sown. Partly, it had its origin in the constitutional development of medieval Europe when the merchant began to receive prestige and social and economic status. Calvinism with its emphasis on frugality played no small part in setting the stage for industry. Savings from the careful consumption of agricultural goods allowed capital for investment and experimentation. The scientific emphasis of the eighteenth century contributed greatly to experimentation and invention. Experimentation and invention directed toward greater production allowed man to obtain

more goods for the same amount of effort and resources. The two essential elements--savings and increased productivity--permitted the inception of a dynamic economy.[1]

The industrial revolution resulted first in improved methods of agriculture. In this way people and resources were freed for experimentation and invention without drastic demands for savings in consumption. Early industrialists did not immediately make the benefits of advanced production available for general consumption. Through saving the fruits of production, more capital was made available for investment. It was only after labor began to organize that the fruits of increased productivity were consumed by the worker. But by this time the industrial economy was self-sustaining; that is, it was able to support an expanding consumption and still save enough to expand production well beyond consumption. Thus the economy moved from one based on agriculture to one based on industry or the production of goods.

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[1]Barbara Ward, Five Ideas That Change the World (New York: W. W. Norton and Company, 1959), pp. 45-78. Cf. Barbara Ward, The Interplay of East and West (New York: W. W. Norton and Company, 1957), passim. For a concise expression of the essential elements in an industrial economy, see Barbara Ward, "The Economic Revolution," Adventures of the Mind series, The Saturday Evening Post, May 14, 1960, pp. 43, 52, 57-58.

Savings and production were aided by the development of new sources of power. The harnessing of steam played the dominant role in the production of goods and the rapidity of change which in their dynamic interrelatedness came to be known as the industrial revolution. The external combustion engine with its steam power had limitations. It was large and bulky. Steam was difficult to transfer over large areas. The internal combustion engine mitigated the problems of size and transportation; with the discovery of electricity, production was freed of its partial confinement. It is yet to be seen what repercussions the splitting of the atom will have on production. Atomic submarines and radioactive medicine are certainly products vastly different. Atomic research promises new horizons in the production of goods and services.

What social elements are needed to assure the growth of the economy in the atomic age? The elements are the same as those which were needed to progress in the steam, the oil, and the electric eras. Society must continue to (1) extend its educational level, (2) improve the internal structures such as roads, power, airways, and communications, (3) improve methods of farming so that people and capital can be

released for other activities, and (4) advance industrialization or the organization of production.[1]

If the United States and the world are to be successful in expanding the economy in the atomic age, industry must provide goods and services at much higher rates per unit of effort and resources. The direction is clear. First, production will be increased through a wider utilization of the mass production principle, which promises to be extended to all phases of work. It is applicable wherever groups of individuals assemble to accomplish a task. Mass production is a social principle; it is a principle of human organization. It organizes people through specialization and division of labor. The individual does not produce; the organization does. All members are dependent upon the organization to be productive.[2] Since World War II, management has become a necessary science of production. Through management, productive activity is effectively and efficiently channeled. Management plans, organizes, directs,

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[1] Barbara Ward, "The Economic Revolution," The Saturday Evening Post, May 14, 1960, p. 52.

[2] Peter F. Drucker, The New Society (New York: Harper and Brothers, 1950), pp. 4-6.

and controls the activities of others in order to produce in the most efficient manner.[1]

Second, production will be increased through the application of the principle of automation, which is relatively simple. The thermostat is an excellent example. It constantly measures the temperature of a room. When the temperature reaches a lower limit, it makes an electrical contact which starts the furnace. When the temperature reaches an upper limit, the electrical contact is broken and the furnace stops running. Thus the thermostat is an automatic control. The same principle is being used in human organization. A group of inspectors who are independent of the line organization may operate a constant check on the production workers. When the work deviates from set limits, the activity of the group is changed. The work of human effort may be checked by automatic machines which will indicate the proper direction in which to concentrate efforts. In such a way a large procurement department discovers the equipment and supplies needed, where they are needed, and when they are needed. The automated machine coordinates the information from many departments of production,

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[1]Harold Koontz and Cyril O'Donnell, Principles of Management (New York: McGraw-Hill Book Company, Inc., 1955), pp. 3-4.

sales, management, engineering, and maintenance. But the entire inventory effort and purchasing effort become an automatized human organization.

Industry is far more than a technological development. It depends upon the empirical growth of technological culture; it is a social and human organization designed to advance technological culture. And the advancement depends upon knowledge, a knowledge of the cultural base upon which to build.

The Role of Education

Education is the system through which selected beliefs, values, and behavioral patterns are consciously transmitted to the young. Each social group seeks to effect a change in the behavior of the learner which is compatible with the values and beliefs which the group deems important. The individual in a learning situation learns from society the behavior which is expected of him and at the same time contributes his interpretations of society's demands. In brief, learning centers about that which society deems important.

Interrelatedness of Society

With the foregoing point of view concerning industry and the economic structure in mind, the schools cannot ignore the transmission of knowledge necessary for a fundamental understanding of industry. Education must foster an understanding of industry as the basic means of promoting production and savings, the two basic elements of all economies. Education must foster the understanding of the global nature of the economy. Whether by free capitalism or by communism, the two basic elements are necessary for a nation to become self-supporting. But in many of the agrarian societies of the world, saving is difficult from the meager familial production. Saving can be accomplished by self-help and foreign aid or it can be accomplished by the communist method of forced saving, ignoring the extreme poverty and starvation it may cause. But forced saving is a rapid method of advancing the economy and production. Russia is an excellent example of the rapidity of the communist method. The American schools must help the peoples of prosperous free nations understand the increasing responsibility of modern life. Isolationism would mean retrogressing. Failure to help the underdeveloped nations will surely force those nations to accept the communist method in spite of its

immediate cruelty. The help must include technological education and social organization for production.

The Role of the Individual

The individual is subordinated by the world economy and industrialism. He no longer is the artisan; he produces nothing as an individual.[1] His efforts are coordinated with those of others; only the organization produces. But man, even collectively, may not be productive today. Man needs machines. Machines can be used to maintain accuracy beyond human capacities, they can calculate in hours what would take man a lifetime, they can concentrate the power of an army, and, most important of all, they can free man of all routinized work and free him for rational tasks.

The individual, although subordinated by industry, in many respects has obtained a high degree of autonomy through industrialism. He is autonomous in the selection of his specialization. Division of labor allows the individual to pursue a particular interest to depths not otherwise possible. The degree of participation of the individual in the production

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[1] The author is speaking of the average individual and is cognizant of a minority of skilled tradesmen who are creative. The products of hand craftsmen have a limited market, based upon the esthetic value.

of goods and services is largely a matter of his choice. Through education and specialization he can reach a level of high participation. Since man has been released from many of the routine tasks of industrialism by machines, his tasks encompass a higher proportion of decisions than ever before. He works more directly with other human beings. He must make the decisions the machines cannot make. His responsibilities are ever-mounting; he must continually seek ways in which human skills and cultural developments can be blended to obtain higher productivity and greater service.

All students in the American schools should have the opportunity to understand the interrelatedness of industrial society, the role of the individual in the society, and the social institution through which production is accomplished. The industrial arts program is ideally suited to the task of developing and carrying through this phase of general education.

Industrial Arts Education

Stemming from the apprenticeship system, a form of manual training was introduced in the public schools at an early stage of their development. Adhering to the psychology of the day, educators thought that the work had great merit in exercising the hand and the eye. As time

progressed, meaningless exercises were replaced by individual projects based upon the hand skills of the individual craftsman. It is at this stage that all too many industrial arts programs have remained.[1] They have been dedicated primarily to the study of technological development. Even technological development has been highly selective and limited. New products have been imitated by the students, using the tools and materials of the classroom, with little or no insight into actual production methods. As an example, two years ago the author informally asked over 20 machine shop instructors in colleges and high schools of three different states if they could help him understand the process of ultrasonic machining. No one was able to do so; only one had heard of the process. In all too many cases, neither the schools nor the instructors receive even the journals of industry which would help them know of the recent technological developments of industry.

In an age in which much of the technological development is actually in the field of human organization, the formal educational system must help young citizens understand

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[1]The reader may wish to scan the journals, The School Shop and Industrial Arts and Vocational Education, which are two leading publications in the field. He will find an overwhelmingly large portion of each issue dedicated to hand-crafted individual projects.

the organization. Industry has its social structure and social processes as well as its technology. The social structure and social processes of industry affect the individual's status within the industry and in the community. They affect his movements, territorially and socially. Indeed, they affect his total social being and social organization. Very little has been done by industrial arts educators to foster an understanding of the social structure and social functions of industry. Few attempts have been made to understand industry as a social institution.

Vision has not been totally lacking. There have been some leaders who were not unconscious of the need for the social and human aspects of industrial study. As early as 1900, John Dewey had children in his laboratory school work with wood and metal so that they could experience directly some of the socially significant processes by which society is perpetuated. Dewey explained:

> We must conceive of work in wood and metal, of weaving, sewing, and cooking as methods of living and learning, not as distinct studies.
>
> We must conceive of them in their social significance, as types of processes by which society keeps itself going, as agencies for bringing home to the child some of the primal necessities of community life, and as ways in which these needs have been met by the growing insight and ingenuity of man; in short, as instrumentalities through which the school itself shall be made a genuine form of active

community life, instead of a place set apart in which to learn lessons.[1]

A few years later, in 1904, Charles Richards published an editorial in which he urged the change of name from "manual training" to "industrial arts." His major concern was replacing the indefensible and meaningless project with a methodical study of industry. He supported his proposal with these words:

> It is very evident that during the last few years a fundamental change in our attitude toward the proper content and aim of constructive work has developed, and the question now faces us with new meaning and redoubled force. Not only have we now far greater need for a new designation, but the nature of the point of view into which we are growing would seem to present a thoroughly rational basis from which to derive a term of real significance. The gist of this change of view is the fact that we are rapidly leaving behind the purely disciplinary thought of manual training. As long as this idea formed the cornerstone of our creed, as long as constructive work represented in our minds simply an instrument to train the mental powers through the hand, manual training constituted at least a workable and fairly suggestive title. . . .
>
> But now that we not only realize that our old attitude toward this disciplinary value of constructive work is psychologically indefensible, in other words, that there is no such thing as a training of general powers through special exercises, but at the same time are beginning to perceive the immense content meaning of our field, the whole question assumes a different aspect. . . .

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[1] John Dewey, School and Society (Chicago: The University of Chicago Press, 1900), p. 11.

> We are beginning to see that the scope of this work is nothing short of the elements of the industries fundamental to modern civilization. . . .
>
> We are facing the question now as we have been for the past few years, as to whether we shall continue to devote our attention to miscellaneous and more or less meaningless projects, or whether we shall seek in an orderly way to develop an insight into the basic industries of our time and a knowledge of some of the steps through which these have reached their present form.[1]

Twenty years later, Frederick G. Bonser formulated a definition of industrial arts which incorporated the fundamental ideas proposed by Dewey and Richards. By his definition, Bonser has indicated that a social interpretation should be part of the study in industrial arts classes. His definition follows:

> The industrial arts are those occupations by which changes are made in the forms of materials to increase their values for human usage. [As a subject for educative purposes,] industrial arts is a study of the changes made by man in the forms of materials to increase their values, and of the problems of life related to these changes.[2]

Today it is not uncommon for state bulletins and textbooks to paraphrase Bonser's definition. Most publications have defined industrial arts education as that phase

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[1] Charles R. Richards, "Editorial," Manual Training Magazine, October, 1904, pp. 32-33.

[2] Frederick G. Bonser and Lois C. Mossman, Industrial Arts for Elementary Schools (New York: The Macmillan Company, 1924), p. 5.

of general education which studies the tools, materials, processes, and products of industry and the socio-economic influences it has on society. But industry is not an independent entity which operates and influences society. It is a very important segment of the national and world society. Industrial arts, as a phase of general education, should be the study of the structure and functions of that segment of society dedicated to the production of goods and services. Such a study would of necessity view industry in a comprehensive sociological perspective. It would view man as a social being and industry as a means of his organization.

Causes of Lag

The reasons for the lag in industrial arts education have been threefold. First, industrial arts educators have not grasped the intricacy and the interrelatedness of things. They have not viewed industry in its interrelated position. Industry has been viewed primarily as a technical instrument and not as a social institution. Second, industrial arts educators have not sought the foundations upon which industry stands and grows. Industry is so much a part of society and society is concerned so much with industry that an understanding of industry demands an understanding of society. Third, people in the field of industrial arts education have

not taken the time to ground themselves in the social and human aspects of industry.

Purpose of the Study

In this study an analysis of society and industry has been made to demonstrate the interrelatedness of things in an industrial society and to provide the sociological foundations upon which industrial arts education must be based. Specifically, the purpose of the study has been to propose a conceptual basis for developing an industrial arts program designed to assist the young adolescent to meet and to understand the demands of the new era.

CHAPTER II

DESIGN OF THE STUDY

The complexity of industry, its functional relations to society, and the rapidity of change both within industry itself and within society as a whole place upon those who would design an effective industrial arts program the responsibility: (1) of understanding the interrelatedness of industry and society today; (2) of drawing implications therefrom for industrial arts education; and (3) of creating an industrial arts program which will provide for the adolescent sufficient insight into industrial development today to enable him to function more effectively as a young citizen and to move toward his own choice of a specialization with some degree of confidence. This study presents an approach to the problem of designing the industrial arts program for today. It is concerned primarily with the bases of industrial arts education.

Hypothesis

The major hypothesis is that the bases of the industrial arts curriculum (and hence, industrial arts

education) are sociological rather than technological. In other words, the curriculum specialist in industrial arts education must consider industry in its relation to society as a functioning whole. It is the interaction that is significant. The human elements become important not only because the nature of the individual learner affects learning (and hence, instruction and method) but also because human beings, particularly those in groups, affect and are affected by industry in manifold ways. Human interaction with machines, with technical developments, with technology becomes significant. It is not enough to consider industry as a mere part of society. To use a statement of the late Marie Rasey, "The whole is more and other than the sum of its parts."[1]

The Approach

In a sense, the study presents an extended illustration of how implications for industrial arts education may be drawn from an analysis of contemporary American society. A widely used framework of sociological analysis has been adopted for the study. The analysis has included five

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[1]Marie I. Rasey, This Is Teaching (New York: Harper and Brothers, 1950), p. 38.

areas--demography, social morphology, social processes, social institutions, and social change. The method of research used has consisted of three steps.

First, authoritative references in each of the areas which compose the analytical framework used in the sociological analysis have been reviewed. In most cases the references were written by persons occupying status positions in the field of sociology. A few original research reports which utilized objective and clearly defined criteria have been used to describe facets of the study. Much of the demographic and statistical data for the United States was obtained through publications of the United States Bureau of the Census, the United States Office of Education, and the National Office of Vital Statistics.

Second, the facts have been synthesized in relation to (1) conditions and situations which change the behavior and the structure of social groups and (2) conditions which change a portion of the culture.

Third, implications have been drawn from the significant facts which were derived from the sociological analysis and which were perceived to be intrinsically related to the concept of industrial arts education envisioned in Chapter I. For illustrative purposes, limited implementation of certain implications has been suggested.

Limitations

The study has been concerned primarily with the industrial aspects of society and the interrelatedness of industry to, and within, society as a whole.

The study has been centered about the social behavior of individuals rather than individual behavior. That is, it has not been concerned with social psychology of individual behavior.

The study has relied upon literature written by persons occupying positions of high esteem in the area in which the writing has been done. Textbooks presenting the sociological analysis of the various segments of American civilization have been utilized extensively.

Plan of Dissertation

Though not indicated by the format, the dissertation has been divided into five main parts which correspond to the framework of the method of sociological analysis used. In the first part, a demographic analysis supplies a view of the number and distribution of the inhabitants of the society. In Chapter III the composition of the population is described by age, sex, race, nativity, and marital status. The chapter also includes the demographic analysis

of the labor force. In Chapter IV the vital processes of fertility and mortality are analyzed. In Chapter V on migration the movement from one portion of the society to another and the movement in and out of the total society are discussed. The demographic analysis of the society is presented first in order to obtain the spatial concept of the existing society.

The social morphology of the society is presented in the next three chapters. Chapter VI on ecology describes the spatial arrangement of social phenomena. In Chapter VII the social groupness derived from differentiation and solidarity are discussed. The social stratification of the society is discussed in Chapter VIII.

The social processes by which society functions constitute the third main part of the study. Opposition and cooperation of the society are the topics of Chapter IX. The chapter includes the competitive and cooperative aspects of the economic system as a social function. Chapter X presents the social adjustment within the society. The processes of accommodation, acculturation, and assimilation are discussed. Social mobility, or movement through social space, is the topic of Chapter XI.

The fourth main part of the study is a presentation of two social institutions--the family and education. These

two basic institutions serve to illustrate the relations between industry and other institutions. In Chapter XII family life, or the institution of the family, is analyzed as the most basic social institution. In Chapter XIII the social institution of education is presented.

In the fifth and final part of the study, summary and conclusions are presented. Although Chapter XIV presents new material on the theory of social and cultural change, it is placed in the summary section because it deals with changes in the aspects of society which have been discussed already. Chapter XV completes the synthesis of the sociological analysis through a composite view which is more and other than the sum of the significant facts and implications presented in each chapter. It also suggests certain illustrative implementation of certain implications.

The salient points of the material in each chapter and the implications for the curriculum which have been drawn therefrom are presented at the conclusion of the chapter. In the main, the pattern is to present (1) general data, (2) information related to industry, and (3) significant facts and implications for the industrial arts curriculum.

CHAPTER III

POPULATION

The study of population--a monumental task--is constantly being conducted by the United States Bureau of the Census. Primarily, it is concerned with numbers and distribution of persons and institutions. Unless the tallying of numbers were done as one total for the entire world, all enumeration intrinsically involves distribution.

General Characteristics of the Population

The number of persons enumerated in a given area may increase or decline in a given period of time. The population is dynamic and any data must be recognized as a close approximation. Even the decennial enumerations are only close tabulations. Everyone cannot stop at a given time on a given day to be counted; the enumeration spreads out over an extended period. People are moving, dying, being born, changing jobs, receiving pay increases, and doing many other things which affect the accuracy of the tabulation.

The Census information embodies a wealth of material about many institutions as well as the total populace. In

general the analysis seeks information on residence, age, sex, marital status, occupation, education, race, nativity, citizenship, and other features. Some of the important general characteristics of the population will help to establish the importance of population distribution.

Residence

One of the first distinguishing characteristics of the population is residence. The classification is made on the basis of the areas in which the people live and therefore establishes the urban and rural categories. There are sharp contrasts in the characteristics of these two main categories.[1] The socialization of man is completely dependent upon his environment, both physical and biological. The natural milieu of living objects of the farmer is highly contrasted with the man-made culture of the city dweller.

Residence information is not restricted to the dichotomous division of rural and urban. Beginning with the 1920 Census the rural population was further divided into rural-farm and rural-nonfarm populations. The definitions for each of the three categories have been revised several

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[1]T. Lynn Smith, Population Analysis (New York: McGraw-Hill Book Company, 1948), p. 27.

times since the first Census was taken. The last revision was made for the 1950 Census.

According to the new definition, the urban population comprises all persons living in (1) incorporated cities, boroughs, or villages of 2,500 inhabitants or more; (2) incorporated towns of 2,500 inhabitants or more except in New England, New York, and Wisconsin, where "towns" are simply minor civil divisions of counties; (3) the densely settled urban fringe, including both incorporated and unincorporated areas, around cities of 50,000 or more; and (4) unincorporated places of 2,500 inhabitants or more outside any urban fringe. All other people are classified as rural.[1]

The rural population is further divided into rural-farm population and rural-nonfarm population. The rural-farm category includes all rural residents who live on farms; the rural-nonfarm category, all other rural residents. In the 1950 Census, rural residents who were living on farms but paying cash rent for house and yard were classified as rural-nonfarm residents.[2] In such cases the residents are not farming the land on which they live and are rightly classified as nonfarm.

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[1]U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959), p. 2.

[2]Ibid.

Figure 1 shows the census regions for the United States. The four main regions are the West, the South, the North Central, and the Northeast.

Tabulations for the Census of the United States are made for each state, county, division of a county (such as township or ward), and urban center. Cities are further divided into wards and in the larger cities the wards are subdivided into census tracts. The data supplied by each of these geographic areas permit analyses of many kinds.[1] The Census Bureau also tabulates data for "standard metropolitan areas." A standard metropolitan area is a county or group of contiguous counties (except in New England where towns are used) which contains at least one city of 50,000 inhabitants or more. Standard metropolitan areas are used extensively for presenting economic and social statistics.[2]

From the time the first decennial Census was taken in 1790, the population of the United States had grown approximately 39 times by 1950 and will be probably 44 times as large by 1960. In 1790 there were approximately four million (3,929,214) persons in the United States. By 1850

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[1]Smith, op. cit., p. 19.

[2]U. S. Bureau of the Census, Annual Survey of Manufactures: 1957 (Washington, D. C.: U. S. Government Printing Office, 1959), p. 6.

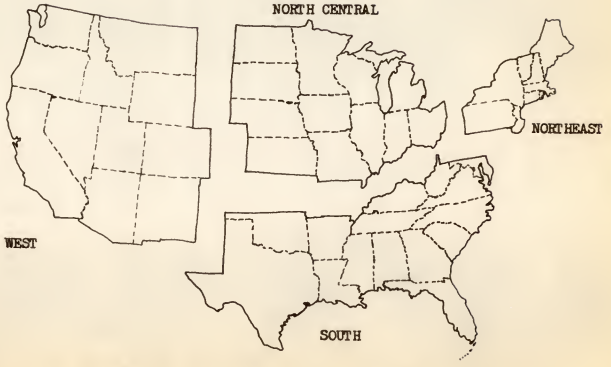

Fig. 1. — Map of the United States, showing census regions. Adapted from U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959), p. XII.

the number was more than five times as large (23,191,876 persons). In 1900 the Bureau tabulated 75,994,575 persons, more than three times the number in 1850. The last decennial Census placed the figure at 150,697,361 persons. The population had approximately doubled since 1900. The estimated population figures indicate the population for 1960 will be more than 179 million persons.[1]

The shift from a predominantly rural nation with an agrarian economy to a nation which is mostly urban and industrial occurred within the twentieth century. In 1900 there were nearly 46 million persons living in rural areas and only a little over 30 million living in urban areas.[2] Figure 2 shows the growth of population in the United States since the first decennial Census in 1790. When the first Census was taken, more than 96 percent of the population lived in rural areas or in towns containing less than 8,000 inhabitants. It was 1820 before a city of 100,000 inhabitants was recorded in the United States. The urban population was greater than the rural population for the first

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[1]U. S. Bureau of the Census, Statistical Abstract . . . 1959, p. 21.

[2]Ibid.

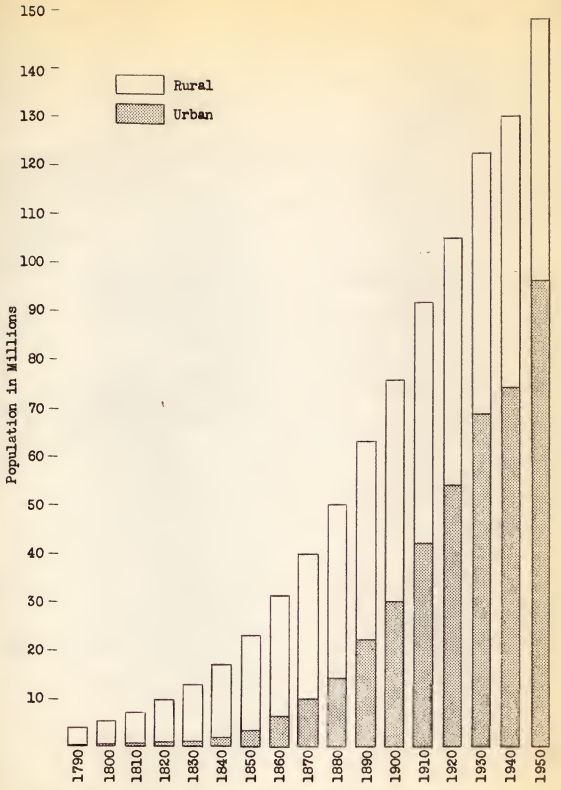

Fig. 2. — Population of the United States, by residence: 1790-1950. Data from U. S. Bureau of the Census, Statistical Abstract of the United States: 1959.

time in 1920. In that year the urban part made up 51.4 percent of the total population.[1] The trend continued so that by 1950, 63.7 percent of the population were residing in areas classified as urban. Of the 36.3 percent living in rural areas, the majority lived in rural-nonfarm areas. Of the 150,697,361 persons living in the United States at the time of the 1950 Census, 96,467,686 were living in urban areas and 54,229,675 were living in rural areas. The rural-nonfarm population consisted of 31,181,000 inhabitants which accounted for approximately 21 percent of the total population. The rural-farm population accounted for only about 15 percent of the total population, or a total of 23,048,000 persons.[2]

In 1950 about 35 percent of the population lived in urban areas of 50,000 persons or more. This is more than one-half of the urban population. The total number of inhabitants in these areas is about 53,243,000 persons. The urbanization of the nation is even more striking when viewed by standard metropolitan areas. In the 180 standard

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[1]T. Lynn Smith, The Sociology of Rural Life (New York: Harper and Brothers, 1953), p. 50.

[2]U. S. Bureau of the Census, Statistical Abstract . . . 1959, pp. 5, 16.

metropolitan areas in 1950 there was a total population of 86,555,699 persons.[1] The significance of the figures is apparent; more than one-half of the population was aggregated in about 180 population centers.

Age

The age composition of the population is regarded as significant in most demographic analyses. Information about all of the social institutions is made meaningful through age differentials. For example, the educational data are primarily concerned with only those persons who are of school age. Industrial production is determined to a great extent by age. All of the other demographic factors discussed in this and the two subsequent chapters are highly dependent upon age differentials. The concept of age pervades all aspects of society and its culture.

The age composition of the nation and its distribution in urban and rural areas have been estimated by the Bureau of the Census for 1956.[2] The principal age

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[1] Ibid., pp. 16, 17.

[2] Ibid., p. 24. Estimates made by the Bureau of the Census for population figures after April, 1950, may be based upon monthly surveys of approximately 35,000 households. Population estimates which are not based upon the monthly surveys are derived by statistically projecting the 1950

differentials of the nation may be derived by a careful analysis of the data. (1) The youth of the nation is disproportionately found in rural areas. In 1956 only 36.9 percent of the nation resided in rural areas, yet 41.2 percent of the youth from birth through 19 years of age were found in rural areas. Rural-nonfarm youth were slightly more numerous proportionately than rural-farm youth. (2) The young adult population of the nation was disproportionately heavy in the urban areas. Although 63.1 percent of the nation resided in urban areas, there were 65.4 percent of the people aged 20 through 44 living in the nation's cities. The urban excess is drawn almost completely from the rural-farm population, the rural-nonfarm being just about proportionately equal for the age group. The ages from 20 through 44 are the most productive years of life. It is apparent, therefore, that the urban portion of the nation has a greater relative productive potential than the rural areas. (3) The distribution of the middle-age years, 45 through 64, relatively favored the urban areas. The urban numerical supremacy of the middle-aged population was drawn completely from the rural-nonfarm population. (4) The old age

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census data, utilizing current statistical data on births, deaths, immigration, and emigration. In some cases, data may be supplied by State Departments of Education.

population of the nation was proportionately well distributed in 1956; however, the urban and rural-farm areas had slightly larger shares of the aged.

The age distribution according to residence is significant in many details. Economically, the rural population with its smaller proportion of productive adults has a larger proportion of the burden of rearing the nation's children. Since the rural population has a larger proportion of youth, it is apparent that as young adults they migrate to urban areas. Migration occurs in the early young adult age range. Youth reared in rural areas move to the city before they marry and start a home; they must move before social and financial pressures become too great. The aged population seem to prefer the urban or rural-farm life a little more than the rural-nonfarm living. Aged women prefer the urban apartment and the convenience of social proximity. In 1956, however, a greater proportion of aged men retired on farms. The age distribution also indicates the dependency of persons at the extremes of the age scale on persons who occupy the middle area of the scale. That is, children under 15 years of age and persons over 65 are greatly dependent on the production and service of others.

The median age of the population has continually increased throughout the time the Census information has been

recorded. In 1820 the median age of the country was 16.7 years. By 1900 it had risen to 22.9 years. At the time of the last decennial Census it stood at 30.8 years. The older folks in the nation are living longer. Many causes must contribute to the increased age of the population. Improved medicine and physical care, a higher level of living, improved dietary habits, increased availability of proper foods, and many other factors undoubtedly have had the effect of increasing the nation's median age.

Sex

The proportion and distribution of the sexes in the nation are of primary importance. Sex differentials in age groups, in residence groups, in states and regions, in racial groups, in industrial and occupational groups, and in many other social groupings are essential to the understanding of the society.

The sex ratio is the number of males for each one hundred females in a given area. Large deviations in the sex ratio will significantly affect the marriage rate, the birth rate, and the death rate of an area. Scarcity of women contributes to a reckless regard for life, as has been witnessed on America's western frontier, in lumber camps, and in many of the mushrooming mining towns. The reverse

is true in many small textile-centered towns and in some residential towns which are heavily populated by widowed women.[1]

At the time of the 1950 Census there were 98.6 males for every 100 females in the United States. But in the urban areas, there was a sex ratio of 94.6. In the rural areas, the sex ratio was 106.3. Among the rural population, the sex ratio for the rural-nonfarm was only 103.6, whereas in the rural-farm area there was a surplus of 110.1 males for every 100 females.[2] By 1956 the estimated figures of the population revealed a sex ratio of 95.1 for the nation. The urban sex ratio was 91.0 and the rural was 103.9. The rural sex ratio split as follows: the rural-nonfarm had 98.1 males for each 100 females and the rural-farm had 110.7 males for each 100 females. The rural sections of the nation have more males than females and the cities have more females than males. Males have always outnumbered females in the farm areas.[3]

The age-sex distribution for 1956 may be seen by number and sex ratio in Table 1. The rural-farm areas had

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[1]Smith, op. cit., p. 81.

[2]U. S. Bureau of the Census, Statistical Abstract . . . 1959, pp. 24, 28.

[3]Ibid., pp. 22, 24.

TABLE 1

AGE-SEX DISTRIBUTION OF POPULATION OF THE UNITED STATES, BY PLACE OF RESIDENCE, 1956[a]

(Numbers in Thousands)

Age	Total			Urban			Rural-Nonfarm			Rural-Farm		
	Male	Female	Ratio	Male	Female	Ratio	Male	Female	Ratio	Male	Female	Ratio
0-19	30,715	30,050	102.2	17,700	18,022	98.2	8,177	7,863	104.0	4,838	4,165	116.2
20-44	26,117	29,226	89.4	16,965	19,208	88.3	6,238	7,117	87.7	2,914	2,901	100.5
45-64	16,574	17,222	96.2	10,710	11,819	90.6	3,472	3,164	109.7	2,392	2,239	106.8
65 and over	6,670	7,734	86.2	4,004	5,203	77.0	1,396	1,613	92.8	1,170	918	127.5
All ages	80,076	84,232	95.1	49,379	54,252	91.0	19,383	19,757	98.1	11,314	10,223	110.7

[a]Data from U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959), p. 24.

more males than females at all ages, whereas the urban areas had more females than males at all ages. The sex ratio for 1956 seems to follow the normal pattern derived by using raw data. In the table, the youth range shows more males than females. The young adult range shows many more females than males. A reversal occurs in middle age so that the number of males per 100 females is higher than it was in young adulthood. In old age the proportion of males again lowers. When the sex ratio is derived by using birth and mortality rates, altered by immigration and emigration figures, the rates are usually higher for young adults and lower for middle age.[1] It seems plausible that there is considerable error in raw data because middle-aged women have a tendency to report an age lower than the actual age. The tendency is evident in all residence categories. The sex ratio for the nation has declined steadily since 1910 when it stood at 106.0. In 1930 there were 102.5 males for each 100 females; in 1940 the number of males had declined to 100.7 for each 100 females. The ratio in 1956 had lowered to 95.1. The decline in the sex ratio seems to correspond directly to the increase in life expectancy. The large increase in number of women in the upper age brackets may well account for the decline in

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[1]Smith, op. cit., pp. 81-84.

the national sex ratio. There are other contributing factors, such as the decline in mother deaths in childbirth and the fact that women, as a whole, do not enter the occupations which have high mortality rates.

Race and Nativity

The characteristics of race and nativity are extremely important in the study of a nation and its social institutions. Racial characteristics such as skin pigmentation, color and texture of hair, and facial features are not readily changed and thus serve as apparent indices of racial groupings. Although national origin is indicative of certain racial stocks in many cases, it is more useful as an index of cultural background. A person's national origin supplies insight into the customs, folkways, and mores which he has brought to his new home.[1]

The information supplied by the Bureau of the Census, which classifies the population according to color, is based primarily on observation and not on replies to questions. People are classified as white or nonwhite. A person of mixed parentage is placed in the classification of

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[1]T. Lynn Smith and C. A. McMahan, The Sociology of Urban Life (New York: The Dryden Press, 1951), p. 180.

the nonwhite parent. The nonwhite population consists of Negroes, American Indians, Japanese, Chinese, and all other groups not classified as white.[1]

The white proportion of the nation has remained stable throughout the twentieth century. In 1900 the white population accounted for 87.9 percent of the population. The percentage was 89.8 in both 1930 and 1940. At the last decennial Census in 1950, the white population accounted for 89.5 percent of the total population. Of the 10.5 percent which were classified as nonwhite, 10.0 percent were Negroes, 0.2 percent were American Indians, 0.1 percent were Japanese, 0.1 percent were Chinese, and all other nonwhite groups each accounted for less than 0.1 percent. According to the estimated populations of 1958, the white population proportion had lowered slightly to 88.9 percent of the total.[2]

Of the 89.5 percent of the 1950 national population which was white, 64.3 percent lived in urban areas, 18.8 percent lived in rural-nonfarm areas, and 13.1 percent lived in rural-farm areas. A total of 134,942,028 white persons were living in the United States in 1950. The white population

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[1] U. S. Bureau of the Census, Statistical Abstract . . . 1959, p. 2.

[2] Ibid., pp. 28, 32.

was divided into native-born and foreign-born; 92.5 percent were native-born and 7.5 percent were foreign-born. Of the total native white population, 62.7 percent lived in urban areas, 21.9 percent lived in rural-nonfarm areas, and 15.4 percent lived in rural-farm areas. The white foreign-born had a tendency to stay in the urban ports of entry. Of the total white foreign-born population, 83.5 percent lived in urban areas. Of the remaining 16.5 percent, 11.0 percent lived in rural-nonfarm areas, leaving only 5.5 percent residing on farms.[1]

The Negro population of 1950 represented 10.0 percent of the total population. Negroes resided in cities at about the same rate as the white population; 62.4 percent of the Negro population lived in urban areas. Of the 37.6 percent of the Negro population living in rural areas, 16.6 percent lived in rural-nonfarm areas and 21.0 percent lived on farms. Proportionately the Negroes were well represented on the farms. The Negro population was highly concentrated in the region of the South. The South contains sixteen states and the District of Columbia, as indicated in Figure 1. There were 10,225,407 Negroes in the South in 1950, which was 68.0 percent of the total Negro population. In other words, one-third

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[1] Ibid.

of the 48 states which existed at that time housed more than two-thirds of the Negroes in the nation.

The other nonwhite population accounted for 0.5 percent of the 1950 population. The American Indians, who accounted for 0.2 percent, were located mostly on reservations, a fact which places 52.0 percent of the Indian population in rural-nonfarm areas. There were 31.6 percent on farms and only 16.3 percent resided in the nation's cities. The Japanese and Chinese were primarily city dwellers, having 71.1 percent and 93.0 percent respectively living in urban areas. Of the Japanese living in rural areas, 10.0 percent did not live on farms and 18.9 percent did. Of the Chinese who lived in rural areas, 5.0 percent were in rural-nonfarm areas and 2.0 percent were on farms.

In 1950 there were 10,161,168 foreign-born white persons residing in the United States. Italy contributed the highest percentage of foreign-born white stock, with 14.0 percent. The next highest percentage came from Germany. In Table 2 the percentage of foreign-born is given for the ten countries which contributed the most. The ten countries listed collectively account for 70.9 percent of the total foreign-born white population. Sweden, which contributed the tenth highest number of foreign-born people living in the United states, contributed only 3.2 percent of the total.

TABLE 2

PERCENTAGE OF FOREIGN WHITE STOCK FOR TEN HIGHEST CONTRIBUTING COUNTRIES, BY COUNTRY OF BIRTH: 1950[a]

Country of Birth	Percent
Italy	14.0
Germany	9.7
U. S. S. R.	8.8
Czechoslovakia	8.5
Canada, other than French	7.5
England and Wales	5.8
Ireland	5.0
Mexico	4.4
Austria	4.0
Sweden	3.2

[a]Data from U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959), p. 35.

The sex ratios for foreign-born groups were much higher than for native groups. The native white population had a sex ratio of 98.6, whereas the foreign-born white had one of 103.8. Of the nonwhite group, the Negro had a sex ratio of 94.3, the American Indian 108.7, the Japanese 117.7,

and the Chinese 189.6. Except for the Negro, the nonwhite group had an extremely high ratio of males to females.

Marital Status

Marital status of the population is greatly affected by place of residence. The city contains a proportionately high percentage of single women and widows and a low proportion of married women. Conversely, on the farms of the nation there are high proportions of married and relatively few single and widowed women 14 years old and older. In young adulthood (ages 20 through 44) there are more married men and fewer bachelors on the farms than in the cities. The differences are much less distinct in the male population than in the female population.[1] The differences in marital status may be, in part, the result of the varying sex ratio in urban and rural areas just at the age span where marriage usually occurs. In the farm areas where married men and women prevailed, the sex ratio was about equal. In 1956 there were 100.5 males for every 100 females between the ages of 20 and 44. In the cities, there were only 88.3 males for each 100 females for the same age period. The farm woman is less likely to be divorced. If she should lose her husband,

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[1]Smith and McMahan, op. cit., p. 229.

she is more likely than the city woman to find another.

In 1958 approximately 121,246,000 persons 14 years old or older were living in the United States. Of that total 21.5 percent were single--24.5 percent of all the males and 18.8 percent of all the females. Of the entire marriageable population, 67.8 percent were married--69.8 percent of all the men and 66.0 percent of the women. Women were more likely to be left widowed than men--12.8 percent of the women but only 3.9 percent of the men. Women were also more likely to be divorced--2.3 percent of the women in comparison with 1.8 percent of the men.[1]

In accordance with national mores, girls marry at a younger age than boys. Of all the boys between 14 and 19 years of age, 97.5 percent were single, whereas only 86.5 percent of the girls in the same age bracket were single. The difference was even more pronounced in the ages from 20 to 24. Of all the people in this age bracket, 52.1 percent of the men, but only 29.0 percent of the women, still remained single. The trend slowly reversed itself throughout the remaining years of life.[2]

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[1] U. S. Bureau of the Census, Statistical Abstract . . . 1959, p. 40.

[2] Ibid.

There seems to be little racial differentiation in marital status except in the South. The southern Negro is much more likely to remain single than his white neighbor.[1] How much of this deviation is caused by the apparent tendency of southern Negroes to live together without marriage is not known. The Negro family with different fathers for the several children of the same mother is not uncommon. The author has seen many school registers in which a Negro mother has registered each of her children under a different surname and has listed her status as single.

The Industrial Population

The numbers and distribution of people in industry are derived principally from current population surveys and the decennial population Census. Data are also supplied by the Census of Manufactures and the Annual Survey of Manufactures. From the data it is possible to apply to industry the characteristic analysis made for the entire nation. That is, the labor force can be viewed by residence, age, sex, race, and nativity, and by marital status distributions. In addition, such features as time worked and income, which are characteristics peculiar to the labor force, are needed

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[1] Ibid., p. 41.

to complete a comprehensive analysis. The information on manufactures adds to the population picture by supplying numbers of workers for the major industries, output data, and other data which can best be supplied by the industries rather than by the individual workers.

Personal Characteristics

The labor force as defined by the Bureau of the Census includes persons 14 years of age and older who were employed, unemployed, or who were in the Armed Services during a specified week. Employed persons are those who did any work for pay or profit during the week, or who worked for 15 hours or more during the week in a family business or farm. Those persons who did not work or look for work during the week, but who had a job or business from which they were absent for the week, are still considered as employed persons. Unemployed persons are those who did not work during the week but who were seeking work, or those who were on layoff from a job.[1]

The decennial Censuses before 1940 used the concept of gainful workers to describe the labor force. The gainful worker classification included all persons ten years old and

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[1] Ibid., pp. 201-202.

older who reported a gainful occupation without regard for employment-seeking status.[1] The concept must be kept in mind whenever comparative data are used for years prior to 1940.

When labor force data are used, two different major divisions are necessary for a comprehensive and meaningful analysis. The major industries in which the labor force works is the first division. The Bureau uses a list of twelve major industries and a miscellaneous grouping of industries not reported. For more accurate and detailed analyses, the data accrued for each of the major industry groups are subdivided into their component industries. The major occupations in which the labor force works form the second main division made by the Bureau of the Census. Each occupation is categorized into one of the twelve major occupation groups or into a miscellaneous category of occupations not listed. Approximately 18,000 occupations were categorized into the thirteen groups at the time of the 1950 Census.

Figure 3 shows how the labor force was divided into major industry groups. Manufacturing accounted for more than one-fourth of the entire labor force in 1950, which was the highest percentage of any industry. Wholesale and retail

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[1] Ibid.

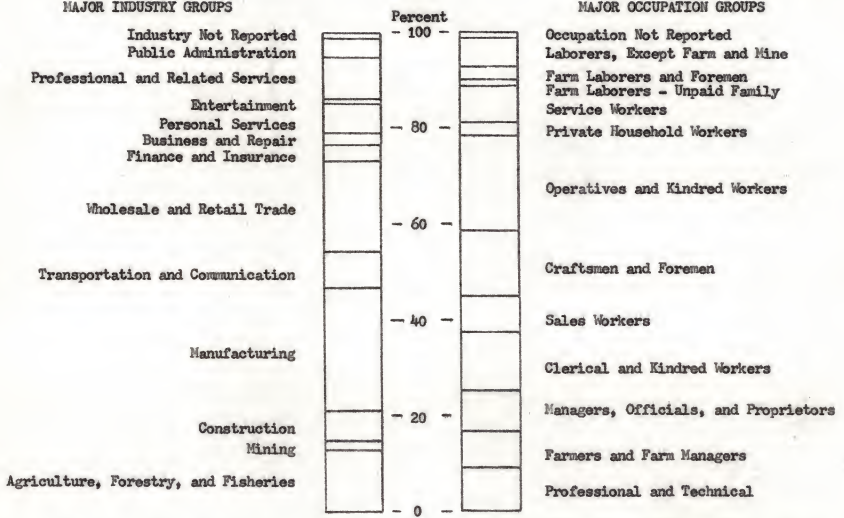

Fig. 3. — Labor force by major industry and by major occupation groups. Data from U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959).

trade accounted for the next highest percentage, with 18.8 percent of the total. Only about 1.0 percent of the labor force were employed by the entertainment and recreational services. Figure 3 also shows the proportions of the labor force in each of the major occupation groups. About one-fifth of the labor force (19.8 percent) were operatives and kindred workers. Craftsmen, foremen, and the like accounted for 13.8 percent of the labor force and clerical workers for 12.3 percent. Paid farm laborers and foremen accounted for the smallest portion of the labor force with 2.7 percent.

In Table 3 the percentages of industry groups in each occupation group are shown for 1950. Professional services such as medical, dental, and education had a higher proportion of their employees in the professional occupations than did other industries. The personal service industries and the professional services used smaller proportions of their personnel as managers. Mining, construction, and manufacturing all used about two-thirds of their personnel in the occupations of craftsmen and operatives, whereas finance, professional services, and agriculture used less than 10 percent in those two categories. All industries utilized the various occupation groups to some degree.

In 1950, only 12.5 percent of the labor force were employed in agriculture, leaving 87.5 percent in nonagricultural

TABLE 3

PERCENTAGES OF INDUSTRY GROUPS IN EACH OCCUPATION GROUP, BY SEX: 1950[a]

Industry and Sex		Profes-sional	Mana-gerial	Cleri-cal	Sales	Crafts-men	Opera-tives	Service Workers	Laborers	Not Reported	Total[b]
Agriculture	M	1.9	2.3	0.4	0.2	1.0	2.7	0.4	81.4	0.1	90.9
	F	0.1	0.1	0.7	0.1	c	0.3	0.2	7.4	c	9.1
Mining	M	3.5	2.1	2.9	0.2	17.9	70.2	0.7	0.1	0.2	97.8
	F	0.1	c	1.8	c	0.1	0.3	c	c	c	2.2
Construc-tion	M	4.2	3.3	1.5	0.3	55.2	8.8	0.5	22.9	0.2	96.9
	F	0.1	c	2.2	c	0.3	0.1	c	0.2	c	3.1
Manufac-turing	M	4.4	3.0	5.1	2.7	18.8	30.0	1.7	8.4	0.3	74.4
	F	0.6	0.2	6.1	0.2	0.9	16.7	0.3	0.5	0.1	25.6
Trans-portation	M	3.3	5.6	10.5	0.4	22.0	25.6	3.1	13.1	0.3	83.9
	F	0.3	0.3	13.9	0.5	0.2	0.5	0.5	0.2	c	16.1
Wholesale	M	1.6	8.6	4.6	17.9	6.5	12.7	7.0	3.8	0.1	62.9
	F	0.4	1.6	9.6	13.0	0.5	2.5	9.2	0.2	0.1	37.1
Finance	M	2.9	11.5	11.6	18.0	2.4	0.6	6.7	1.9	0.1	55.8
	F	0.7	2.4	35.1	2.0	0.1	0.2	3.5	0.1	0.1	44.2
Business and Repair Services	M	7.9	5.2	4.0	3.0	48.1	10.0	2.6	4.2	0.1	85.3
	F	1.6	0.6	11.0	0.3	0.6	0.9	0.6	0.1	c	15.7

Personal Services	M	1.4	1.4	1.2	0.5	2.2	7.2	10.9	3.5	c	28.4
	F	0.7	0.8	3.1	0.3	0.3	9.7	56.4	0.3	0.1	71.6
Entertainment and Recreation	M	19.3	9.9	3.8	1.6	9.3	2.6	22.0	4.4	0.2	73.1
	F	5.5	1.4	10.8	1.4	0.3	0.7	6.4	0.1	0.1	26.9
Professional	M	20.2	1.6	1.8	0.1	2.6	1.4	8.2	0.9	0.1	37.0
	F	37.3	0.8	12.2	0.1	0.1	0.9	11.3	0.1	0.1	63.0
Public Administration	M	9.1	7.5	23.9	0.1	8.2	4.3	15.0	4.7	0.8	73.8
	F	2.7	1.6	19.9	0.1	0.1	0.4	1.1	0.1	0.1	26.2
Not Reported	M	4.0	1.1	1.6	1.5	2.6	2.6	1.2	5.5	38.0	58.2
	F	2.0	0.5	5.6	0.6	0.4	1.0	1.0	0.2	30.4	41.8

[a]Based on U. S. Bureau of the Census, U. S. Census of Population: 1950, Vol. IV, Special Report, Part i, Chap. D (Washington, D. C.: Government Printing Office, 1955), pp. 38-41.

[b]Total percentages may not be sum of percentages because of rounding errors.

[c]Less than 0.1.

occupations. By 1954, the percentage of persons engaged in agriculture had dropped to about 10.6 percent and by 1958, it had declined still further to 8.1 percent. Therefore the 1958 nonagricultural portion of the labor force had increased to 91.9 percent of the total.[1] While the percentage of the labor force in agricultural occupations has decreased from 1950 to 1958, the agricultural output has increased. Using 1947-49 as an index of 100, the index increased from 100 in 1950 to 123 in 1958.[2] Farm technology is continually accruing and manifests itself in a constantly rising per capita output.

Residence.--With the small proportion of the labor force employed in agricultural occupations, it is logical that a similar proportion live on farms. In 1950 there were 14.2 percent of the labor force residing on farms, 68.4 percent in urban areas, and 17.4 percent in rural-nonfarm areas. Of all the employees in the agricultural industries, only 6.2 percent made their homes in urban areas, whereas 81.1 percent lived on farms. The industry group with the next highest percentage of employees residing on farms was that of mining. The mining industries had 11.4 percent of their

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[1] Ibid., p. 209.

[2] Ibid., p. 647.

employees living on farms. Manufacturing industries have been associated closely with urban growth and the aggregation of the population. Of all persons employed by the manufacturing industries, 94.9 percent lived either in the nation's cities or in the anomalous category of rural-nonfarm areas; 77.7 percent of the manufacturing employees resided in urban areas. The wholesale and retail trades industries are directly dependent upon the manufacturing industries. Of all the employees in the trades industries, 80.2 percent lived in urban areas and only 3.0 percent lived on farms.[1]

Big industry and its related services are definitely urban. Collectively the construction, manufacturing, transportation and communication, trades, finance, and business and repair service industries encompass big industry and its related industries and services. Of the employees of these industries, at least three-quarters live in urban areas.

Regionally, manufacturing is heavily concentrated in the northern states. The Northeast had 5,926,352 employees in the manufacturing industries in 1957. The North Central region had almost as many with 5,838,411. The South had only 3,503,111 and the West had the least with 1,837,423.

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[1]U. S. Bureau of the Census, U. S. Census of Population: 1950, Vol. IV, Special Reports, Part I, Chap. D, Table 1.

The metropolitan area of New York-Northeastern New Jersey employed nearly two million persons in manufacturing. The Chicago metropolitan area in the North Central region employed more than one million and Detroit more than one-half million persons.[1] A similar regional picture is obtained if all nonagricultural industries are tabulated. Approximately 60 percent of all the nonagricultural employees were located in the two northern regions.[2]

Age and Sex.--The total population of persons 14 years old and older in 1950 was 111,693,240. Of this total, only 53.4 percent were in the labor force. But there is a drastic change when the labor force is differentiated by sex. There were 79.0 percent of the male population in the labor force, but only 29.0 percent of the female population. Because of the tremendous difference in labor force participation between the male and female populations, most of the ensuing discussion will present data which distinguish the sexes.

The male population has more of its numbers in the labor force than the female population at all ages as shown

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[1]U. S. Bureau of the Census, Annual Survey of Manufactures: 1957, Table 3.

[2]U. S. Bureau of the Census, Statistical Abstract . . . 1959, p. 214.

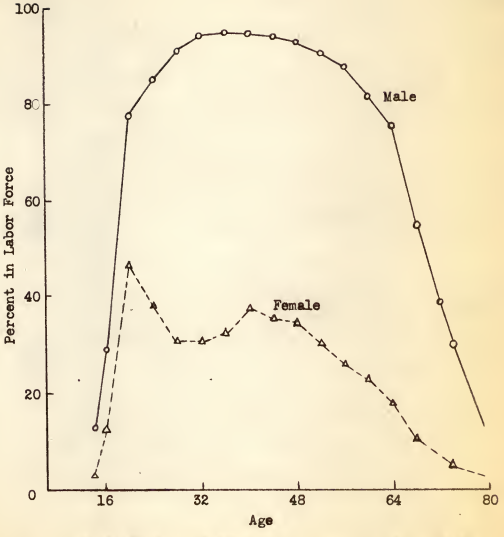

Fig. 4. — Percentages of persons in the labor force, by age and sex: 1950. Data from U.S. Bureau of the Census, U. S. Census of Population: 1950, Vol. IV, Special Reports, Part I, Chap. A, table 2.

in Figure 4. It seems that males have a higher propensity to enter the labor force before graduating from high school. There were 18.0 percent of the 15-year-old population in the labor force. The percentage climbed to 29.4 for the 16-year-olds. Since few students graduate from high school before they reach the age of 17, it seems evident that about one-fourth of the male population left school early to enter the labor force. The male labor force did not reach its peak until age 36 when 94.8 percent were employed. The high level of participation declined very slightly until the male population reached the age of 60. After 60, there was a rapid decline in employment.

The tremendous spurt in employment for the younger female population is indicative of the influence of marriage patterns. The employed female population reached its peak at the age of 19 when about 40 percent of the age group were in the labor force. By the age of 32, many who were only in the labor force temporarily left to manage homes and rear children. The lack of normality exhibited by the female population curve in Figure 4 is concentrated in the span of ages from 16 to 32. While girls are searching for a mate, many of them consider employment as a necessary evil--a necessity until they can embark on the more satisfying task of establishing and managing a home.

The various industries deviate only slightly in the median age of their employees. The median age for male employees in the finance and related industries was 44.5 in 1950, which was the highest median age of any industry group. The lowest median age was 38.0, which was in the manufacturing industries. The large quantities of operatives in the manufacturing industries need little training; youngsters pour into the industries each year, assuming semiskilled and unskilled positions. Industries which require a higher level of skill and training did have a slightly higher median age, but all industries adhered fairly well to the expected median derived from the male age curve in Figure 4, which would be about 40. The median age for females deviated more than it did for males. In the transportation industries and in the finance industries, the median age was about 29.5, which was the low point. Personal services and professional services had high median ages of 40.7 and 38.6, respectively. In the personal services category, the dressmaking shops had a median age of 53.3 which caused the entire category to be rated highly.[1] It appears that in industries where skills and education are higher than normal, the median age is also high.

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[1]U. S. Bureau of the Census, U. S. Census of Population: 1950, Vol. IV, Special Reports, Part I, Chap. D, Table 3.

The median age for each of the major occupational groups is distributed in a similar manner as for the major industry groups. As was indicated by the industries distribution, operatives had the lowest median age of male employees, which was 36.0. The next lowest was the occupational group which includes so much of the young male labor force, the clerical workers. This group includes young office boys and messenger boys whose specific median age was 18.0. The older men tended toward such occupations as private household workers. The median age of such workers was 46.2. Managers, officials, and proprietors as a group also tended to be a little older than the average worker. The median age for this group was 44.6; if farm managers were included, it would be slightly higher. The deviation in the median age of the female labor force by occupation is similar to the male deviation, but more extreme. Clerical workers were low with a median age of 29.7 and managers of farms were high with a median age of 50.4. Other managers and officials also tended to be considerably older than the average female worker.[1] As was seen in Figure 4, the female labor force has a large group of young women who are temporarily employed. The limited skill required for much of the routine work in

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[1] Ibid., Chap. B, Table 6.

the clerical occupations allows large numbers of the young girls to be replaced frequently.

Race and Nativity.--The data on race and nativity of the labor force are distorted unless a distinction is made between the sexes. As an example, 53.1 percent of the total white population were in the labor force in 1950, but this percentage included 79.2 percent of the males and only 28.1 percent of the females. The figures are similar for the nonwhite population--56.1 percent of the total nonwhite population were in the labor force, but 76.6 percent of the males and only 37.1 percent of the females were represented.

The white portion of the nation's population was 89.5 percent of the total in 1950. The labor force proportions of white, Negro, and other races were almost identical. The labor force was racially proportioned with 90.0 percent white, 9.6 percent Negro, and 0.4 percent of other races. For male workers the percentages were 90.8, 8.7, and 0.4, respectively, and for female workers they were 87.2, 12.6, and 0.3, respectively.[1] The female workers deviated most from the national racial pattern. This group included a larger proportion of Negroes than did the male workers.

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[1] Ibid., Chap. D, Table 18.

Negro women more often find it necessary to help support the family than do white women.

Racial selectivity among occupations is quite pronounced. Negroes are particularly scarce in the professions, in sales work, and in the managerial field with the exception of small farm management in the South. Even on farms their numbers are fallaciously enlarged by an inaccurate system of classification used by the Census Bureau.[1] The sharecroppers and share tenants of the South should not be considered farm managers but as farm laborers. They have no prerogatives over the productive part of agreements with the landowners. They have no rights except those transferred by the owner, while the true renter has all rights of the land except those specifically withheld by the contract.

The occupational distribution of the labor force is shown in Table 4 by sex and race for 1950. The low representation of Negroes in the professional, managerial, and sales occupations is apparent. Negroes are particularly concentrated in the four categories of private household work, farm laborers, laborers, and service workers. The specific occupations held by Negroes in the service category were

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[1]For a more thorough analysis of the erroneous categorization of the Negro sharecroppers and share tenants, see Smith, Sociology of Rural Life, pp. 278-85.

TABLE 4

PERCENTAGES OF PERSONS IN THE MAJOR OCCUPATION GROUPS, BY RACE AND BY SEX: 1950[a]

Major Occupation Group	Male			Female		
	White	Negro	Other	White	Negro	Other
Professional, Technical, and Kindred Workers	97.2	2.5	0.3	92.2	5.3	0.2
Farmers and Farm Managers	88.1	11.3	0.6	71.4	27.2	1.4
Managers, Officials and Proprietors, except Farm	97.9	1.7	0.4	96.0	3.8	0.2
Clerical and Kindred Workers	95.4	4.4	0.2	97.9	1.8	0.3
Sales Workers	98.1	1.6	0.3	97.9	1.9	0.2
Craftsmen, Foremen, and Kindred Workers	96.0	3.8	0.2	94.4	5.4	0.2
Operatives and Kindred Workers	90.3	9.4	0.3	90.2	9.4	0.4
Private Household Workers	45.2	50.5	4.3	41.9	57.9	0.4
Service Workers, except Private Household	78.8	20.0	1.2	78.9	18.8	0.3
Farm Laborers and Foremen	79.9	25.2	0.6	66.7	31.7	1.6
Laborers, except Farm and Mine	74.2	25.2	0.6	75.9	23.8	0.4

[a]Derived from U. S. Bureau of the Census, U. S. Census of Population: 1950, Vol. IV, Special Reports, Part I, Chap. B, Table 3.

primarily porters, janitors, and cooks. Negro laborers were found more in nonmanufacturing industries, with construction employing the largest number and the railroads the next largest. By and large the concentration of Negroes is the same for male and female. Females may be concentrated in different occupations from males within a major occupation group, but the differential by major occupation groups is minute. Negro women have a relatively high percentage of their numbers listed as farm managers. The fallacious aspects of this categorization already have been discussed. The Negro woman is more likely to be head of a household than the white woman. In the South, many Negro women support their broods of fatherless children by sharecropping and by governmental aid.[1]

Races other than white or Negro were also found in disproportionately high numbers in the private household occupations and in the service occupations for males. Females were disproportionately high in farm occupations. On America's West Coast, many Japanese work in the grape vineyards and in gardening. Both Japanese and Chinese men and women work in restaurants as cooks and other service personnel. Houseboys

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[1]Cf. T. Lynn Smith, "A Demographic Study of the American Negro," Social Forces, XXIII (1945), 383.

are common among the Oriental races in the United States.

Racial segregation is more pronounced occupationally than it is industrially. Personal service industries used more private household workers and service workers and therefore employed more than 20 percent nonwhite personnel in 1950. Agricultural industries employed slightly less than 14 percent nonwhite personnel. All other industries employed less than 9 percent but more than 5.7 percent nonwhite. The only two industries which differentiated greatly, therefore, were personal services and agriculture.

Marital Status.--The labor force shows a decided preference for married men who are living with their spouses. Of all men 14 years old and older who were married and living with their wives, 90.0 percent were in the labor force in 1950. Of the single men who were eligible for employment by age, only 58.9 percent were in the labor force. There were 56.6 percent of the widowers and divorced men who were 14 years old and older in the labor force.[1]

The picture is distinctively different for women. The lowest percentage (21.6) of participation was found in the married group who lived with their husbands. Single,

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[1]U. S. Bureau of the Census, U. S. Census of Population: 1950, Vol. IV, Special Reports, Part I, Chap. A, Table 10.

separated, and widowed or divorced women participated in the labor force by 46.3, 46.8, and 32.7 percent, respectively.[1] Women who have no husbands to support them find it necessary to work in order to support themselves.

Of all the men in the labor force, 18.8 percent were single, 74.0 percent were married and living with their wives, 2.8 percent were separated, 2.4 percent were widowers, and 1.9 percent were divorced. All of the occupations showed similar distributions according to marital status. The farmers deviated most from the average with 84.5 percent married and living with their wives and only 10.6 percent single.[2] With the constant decline in agricultural workers, the trend evidenced here is logical; that is, the young males are being discouraged from establishing farmsteads and are entering other occupations.

Of all the women in the labor force, 31.8 percent were single, 46.5 percent were married and living with their husbands, 5.7 percent were divorced. Again most occupations were similarly distributed. The farmers and farm managers had a much higher percentage (10.1) of separated married

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[1] Ibid.

[2] Ibid., Chap. B, Table 8.

women than any other group,[1] much of which can be traced to the Negro women of the South. Clerical workers had a disproportionately high representation of single girls, as was indicated in the discussion on age differentials.

General Characteristics

Some characteristics of the industrial labor force are less personal and more general in nature. The time worked and earnings are based largely on the industry. Union membership is greatly dependent upon the industry employing the worker and the state in which he lives.

Time Worked and Earnings.--Regionally, the hours worked and earnings of workers are differentiated to some degree. The average hours worked per week differ very little over the nation. In 1958, the average for the nation was 39.2 hours per week. The range was from 38.3 hours per week for Pennsylvania to 40.8 hours per week for Texas. The average weekly earnings varied considerably among the states and regions. North Carolina had the lowest weekly earnings, $56.26. South Carolina had only $56.55 as an average weekly earning. Nevada had the highest, $102.97 per week. Regionally, the West had the highest average earnings, the North

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[1] Ibid.

Central next highest, the Northwest next to the lowest, and the South the lowest range of earnings. When the data for 1950, 1955, and 1957 are viewed, a congruous pattern is evident. Each of the years has earnings and time-worked patterns like that described for 1958. The same states were low in average earnings and the same states were high.[1]

The hours worked per week were approximately the same for most industries. The coal mining industries were low with average hours of 28.9 for anthracite and 33.9 for bituminous coal. Most other industries had average hours of work per week in the upper thirties.

Average weekly earnings varied considerably among the industries. The variation is still noticeable when the major industry groups are computed. Mining industries paid about $100 to each of their employees for a week's work. Construction industries paid average weekly earnings of $110, manufacturing $84, transportation $90, trade $75, finance $85, and service industries $47. These figures are rough averages, but are indicative of the averages for the industries in each group. Workers in industries which embody physical danger are highly rewarded. Industries whose employees are

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[1]U. S. Bureau of the Census, Statistical Abstract . . . 1959, p. 231.

doing menial tasks reward their employees poorly. Within the manufacturing industries there were large variations. Generally the durable goods industries paid higher than the nondurable goods industries. Textile milling, clothing, and leather goods all were low-paying manufacturing industries; ordnance, primary metals, and machinery industries were high-paying.[1]

Union Membership.--Union membership has grown in numbers since World War II, but has not gained percentagewise. In 1944 there were approximately 14,621,000 members in unions with headquarters in the United States. By 1956 the total had grown to about 18,477,000. The 1944 membership figure represented 34.1 percent of the total nonagrarian labor force and the 1956 membership was only 33.7 percent. In 1956 there were 189 unions in the nation; 137 were affiliated with the AFL-CIO and 52 were unaffiliated.

The membership figures for each state vary tremendously. Washington in 1953 had 53.3 percent of nonagricultural employees as members of unions. At the other extreme was North Carolina with only 8.3 percent. Other states with high membership were West Virginia and Oregon. South

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[1] Ibid., pp. 228-30.

Carolina, Mississippi, and New Mexico had low rates of union membership.[1]

There is apparently a significant correlation between union membership and earnings. The states with the lowest membership had the lowest average weekly earnings. The West is the region of the nation with the highest membership and the highest wages. Likewise the South has the lowest union membership and the lowest earnings.

Population and the Industrial Arts Program

From the foregoing analysis of the population of the United States and industry, twelve significant facts have been selected.[2] Each of the selected facts may have implications for general education and the industrial arts program. However, the interrelatedness of society itself indicates the necessity for viewing many of the facts collectively.

1. Industry has a tendency to cause aggregation and collective living.

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[1] Ibid., pp. 237-38.

[2] The selection is, to a large degree, subjective. Another author may have selected other points. In the main, the criterion for selection has been the basic social nature --that is, the degree by which society or industry has been affected. Many additional, somewhat less prominent facts could have been included in the list; only the salient points have been selected.

2. More than one-half of the population of the United States is located in 180 population centers which are highly industrial.

3. The population shift from a predominantly rural and agrarian nation to a predominantly urban and industrial nation has occurred within the present century.

These three facts have a predictive value for the curriculum; the population is still in the process of changing from a self-sufficient way of life to one of interdependence. The emphasis on group work in the schools cannot be lessened if the nation is going to depend on collective living to a greater extent. The schools must help the students experience organized living based on specialization and division of labor in the pursuit of goals. If industry is the center of community living for the majority of the population, the schools have the obligation to help the youth of the nation to understand it as a social organization.

4. The children of the nation are found in proportionately greater numbers in the rural areas.

5. Young adults are found in proportionately greater numbers in the cities of the nation.

6. The youth of the nation is prohibited from entering the labor force at an early age; the entrance age is continually increasing.

Industrial arts education cannot be concentrated in cities; as young adults, great numbers of rural people move to urban areas and their education should help them to make a smooth transition. No longer can schools in rural areas rely upon informal and direct experiences of the youth in primary groups to develop adequate orientation toward adult work with the same assurance that schools had in an agrarian society. They must assume the responsibility for developing orientation toward work and the labor force. Specialization and division of labor have penetrated many aspects of the work world in both rural and urban areas. Since youth are prohibited by law and practice from participating in industry at an early age, the industrial arts program must be designed to help them experience it by indirect participation through formal education.

7. The nonwhite portion of the population is not proportionately employed in all industries or in all occupations.

8. The rural areas of the nation have more males than females and the urban areas have more females than males.

9. Although women have been penetrating the labor force by greater numbers, they have been concentrated in a certain few occupations.

10. Women who do not have husbands on whom to depend for a living are highly represented in the female labor force.

Discrimination by sex and color is widespread in industry, but both forms of discrimination have been reduced and are in the process of reduction. The United States has long cherished a dream of equality of opportunity and is working toward it.[1] The industrial arts should be taught to all youth, irrespective of race, color, or sex; all pupils are affected by industry and should have the opportunity to understand it. Since women frequently find it necessary to enter the labor force when they have no other means of support, the family organization is thus affected. Because the family is a basic social institution, it is necessary for the schools to help students to understand the effects of disrupting the family organization.[2] The industrial arts program can help young students to understand the disrupting effects and the ways in which industry and society seek to mitigate the damaging results. It can help the students to see which institutions are assuming the responsibilities, if they are being assumed at all.

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[1]Cf. infra, Chapter XI.

[2]This does not imply economic determinism, but it does point out the interrelatedness of the two institutions. Cf. infra, Chapter XII.

11. The average age of the nation is steadily increasing; women enjoy a longer life expectancy than men.

12. Union membership is highly regional and workers in the regions with the highest membership receive the highest average earnings.

Workers and industries have been responsive to the increasing age of the population. Retirement systems, pension funds, old-age insurance, and other relative features have been included in recent labor contracts. The industrial arts program must help the students to understand the necessity of such provisions. Through adult education, industrial arts can help to prepare workers for retirement; it can help them to develop avocational interests and skills. Industrial arts must help students to understand labor organization. Unions frequently negotiate for workers in an industry whether they are members or not. Sometimes negotiations are on state or even national levels. Much labor legislation is affected by union lobbying procedures. Labor relations is a subject area which has been neglected by the industrial arts program.

In summary, the following implications seem to be clear and basic: First, because of the shift to an urban and industrial nation, because youth cannot enter industry and learn about it by direct experience, because industry causes people to live collectively, and because there are unequal

opportunities in industry by sex and color, basic industrial arts education must be provided for all youth during the years of the secondary schools. Second, because youth are proportionately high in number in rural areas, because young adults are proportionately high in urban areas, and because large numbers of both boys and girls move to cities, industrial arts education must be provided for both sexes in both rural and urban areas. Third, the increasing age of the population, the large number of young adults in urban areas, and the necessity for many women to reenter the labor force create the need for adult education. Industrial arts education must be provided in evening schools and junior colleges to meet the needs of the adult population.

CHAPTER IV

FERTILITY AND MORTALITY

Demographic changes affect the social, political, and institutional aspects of life. The growth or decline of population is measured by the difference between fertility rates and mortality rates, altered by migration. The rapidity with which the population is increasing or decreasing is of great importance to a nation, a state, or a social institution. When it is considered in light of limited spatial area and available resources, the reasons become evident why specific social groups are extremely interested in the rates of fertility and mortality.

Fertility and Mortality Patterns

Rates of births and deaths are rough indices of the total environment in which they occur. Fertility and mortality are actually biological phenomena. Both are inextricably related to the entire environmental complex--physical, social, and psychological. The environmental complex varies a great deal for different individuals and groups. Therefore,

the incidence of fertility and mortality likewise varies.[1] The poor, the rich, the professional, or the laborer will have rates of birth and death reflective of the corresponding conditions of life.

Fertility

There is lack of agreement concerning the various terms used to designate the rapidity with which a population replaces itself. In general, however, fertility has come to mean the actual rate at which a population is replacing itself; fecundity is the potential reproductive ability of a population. The power of the human species to reproduce is phenomenal. The relatively long period of reproductive years, coupled with the birth cycle of only nine months, would permit each female to produce more than twenty offspring. However, because human beings are rational and social, the reproductive potential becomes an almost meaningless concept. Therefore, this discussion will be confined to actual rates of reproduction or fertility.

Birth Rates.--One index of fertility which is extensively used is that of the crude birth rate. The crude birth

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[1]Noel P. Gist and L. A. Halbert, Urban Society (New York: Thomas Y. Crowell Company, 1956), p. 235.

rate is the total number of children born for each 1,000 persons of the total population in a given year. The use of the crude birth rate may well lead to misunderstanding and false assumptions unless its shortcomings are kept in mind. In the first place, it is a known fact that birth registrations are inaccurate and incomplete. The National Office of Vital Statistics has been working constantly to improve the registration throughout the nation. Especially in the rural areas, the registration of births has been low. The Office of Vital Statistics makes corrections for underregistration by rates determined by the decennial Census. The actual enumeration of children under one year old can be compared with the birth registration of the previous year. In 1950 the birth registration for the United States was 97.8 percent complete.[1] Secondly, the crude birth rates before 1935 registered the place of birth rather than the residence of the parents. Since most hospitals were located in towns, the rural registration was much lower than actual births. Thirdly, the crude birth rate is greatly affected by age and sex distribution. A population with an unusually high proportion of youth under reproductive ages or one with a high

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[1] T. Lynn Smith, The Sociology of Rural Life (New York: Harper and Brothers, 1953), p. 131.

proportion of aged persons will tend to have a deceptively low crude birth rate. Likewise a population with an overabundance of men will have a low crude birth rate.[1]

Birth rates for the United States, adjusted for underregistration, are shown in Table 5 for selected years from 1910 to 1957. Although the rates have been adjusted for underregistration, they still must be used cautiously. The rates are truly rough indices of the trends in fertility. Since the total population now has proportionately larger numbers of persons in the upper age brackets than it formerly did, the rates for the last decade shown in Table 5 are lower than they would be if corrected for age. Since World War II the crude birth rate has well exceeded the rates during the decade preceding the war.

A birth rate is frequently calculated as the number of births in one year for each 1,000 women aged 15 through 44. The rate is usually called a fertility rate or a refined birth rate. It is a much more adequate gauge of the actual fertility than the crude birth rate. The refined birth rates are also listed in Table 5. The tremendous difference in the two rates is obvious. From 1930 to 1957 the

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[1]T. Lynn Smith and C. A. McMahan, The Sociology of Urban Life (New York: The Dryden Press, 1951), p. 246.

TABLE 5

ADJUSTED CRUDE BIRTH RATES AND FERTILITY RATES FOR THE UNITED STATES: 1910-1957[a]

Year	Crude Rate	Refined Rate	Year	Crude Rate	Refined Rate
1910	30.1	126.8	1935	18.7	77.2
1915	29.5	125.0	1940	19.4	79.9
1920	27.7	117.9	1945	20.4	85.9
1925	25.1	106.6	1950	24.1	106.2
1930	21.3	89.2	1955	25.0	118.0
			1957	25.3	122.7

[a]Data from U. S. National Office of Vital Statistics, Vital Statistics of the United States: 1957, Vol. I, Table AV.

crude rate showed an increase of 18.8 percent whereas the fertility rate had an increase of 37.6 percent. The refined rate, being based on only the reproductive segment of the female population, is naturally much more indicative of minute changes in the actual fertility of the nation.

Fertility Ratio.--A relatively standard and accurate gauge of fertility is the fertility ratio. It is the number of children under five years of age for each 1,000 women of child-bearing age, 15 through 44 years. The fertility ratio is similar to the fertility rate. The ratio is a little less subject to fine variations of the rate

because of the larger number of children and the larger span of ages of the children.

Net Reproduction Rate.--Another index used in measuring fertility is the net reproduction rate. In this index mortality rates are balanced against fertility rates in order to ascertain the increasing or decreasing rate of the population. If a sample of 1,000 female infants lived through their reproductive years and had the specific fertility rates which existed at their birth applied to their lives, the result would be the gross reproduction rate. If both the specific fertility and specific mortality rates are applied, the result is the net reproduction rate.

The net reproduction rate for the United States was 1,027 in 1940. By 1950 it had climbed to 1,435 and in 1957 it was 1,759. This means that if birth and death rates stayed the same as they were in 1940 and if immigration and emigration did not occur, the United States population would increase by about 3 percent in a period of about 28 years. By 1957 the expected increase for the 28 years to follow was about 76 percent.[1]

Residential Differentials.--The registration of births in the United States has been sufficiently good in

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[1]U. S. National Office of Vital Statistics, Vital Statistics of the United States: 1957, Vol. I, Table BJ.

recent years that direct comparisons of rural and urban registration are possible. Corrected for underregistration, the crude birth rates in 1950 were 22.9 in urban areas and 25.8 in rural areas. By the elimination of some of the distortion through the use of the fertility rate, the 1950 urban rate was 95.6 children for each 1,000 females aged 15 through 44 and the rural rate was 123.6.[1]

When the rural-urban differentials are calculated in terms of fertility ratios, the trends are essentially the same. The fertility ratios are calculated from Census data; the rural area can, therefore, be further differentiated by farm and nonfarm population. In 1950 the fertility ratio for the urban population was 44 children under five years of age for each 100 women aged 15 through 44. The fertility ratio was 55 for the rural-nonfarm population and went all the way up to 60 for the rural-farm population.[2] The farm population has the highest reproductive rates and the urban has the lowest.

The net reproduction rate reveals differentials similar to the other indices. For a five-year period from 1942-47, the urban rate was 1,085, the rural-nonfarm rate

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[1] Gist and Halbert, op. cit., p. 236.

[2] Smith, op. cit., p. 133.

was 1,465 and the farm rate was 1,859. The net reproduction rate for the farm population was about 75 percent greater than the rate for the urban population.[1]

Most of the fertility indices point to a narrowing of the spread between rural and urban fertility. Although the trend is evident, the causes are not. Many hypotheses have been proffered. Some persons believe much of the change has been caused by the spread of knowledge of contraceptives. The change may be attributed to the size family people cherish. There is considerable evidence that farm people are more like urban people now than in earlier years.[2] Rural people live in much the same way as their city neighbors. Transportation, communication, electricity, sewage, and many other factors contribute to the rural-urban similarity. The farmer has become more dependent upon a monetary economy. Specialization and division of labor have created similar needs and desires for both rural and urban inhabitants.

The regional differences in the rate at which the population is reproducing are quite distinct, but they are not as great in urban as in rural areas. The areas of high fertility are found in the most rural sections of the

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[1] Gist and Halbert, op. cit., pp. 237-38.

[2] Ibid., p. 238.

country. The Appalachian Mountain range through parts of Kentucky, Tennessee, Virginia, North Carolina, West Virginia, and Alabama is one of the areas of very high fertility. In some of the isolated areas of the South, parts of Louisiana, Arkansas, Missouri, and Texas, fertility is high. Other peak areas are the central Rocky Mountain area and the Indian areas of North Dakota and South Dakota. Areas containing large metropolitan districts are the lowest in fertility.[1]

In 1957 the Middle Atlantic division[2] had the lowest crude birth rate, 22.8. The division contains the large metropolitan areas of New York-eastern New Jersey, Buffalo, Philadelphia, Pittsburgh, and others. The regions of New England and West North Central were next with birth rates of 24.2 and 24.3, respectively. The highest rates were in the Mountain region with a rate of 28.9 and the West South Central with 27.5. The South Atlantic and East South Central regions both had crude birth rates of 26.2.[3] The analysis of the Census regions presents a fertility pattern commensurate with

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[1]Smith, op. cit., pp. 134-37.

[2]See Figure 1 in Chapter III for a map of the regions of the United States as used by the Bureau of the Census. The Middle Atlantic division is part of the Northeast region and is composed of New York, Pennsylvania, and New Jersey.

[3]U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959), p. 54.

the analyses above; regions which are predominantly rural have high rates and regions which are mostly urban have low rates.

Racial Differentials.--The crude birth rate has been consistently higher for the nonwhite population than it has been for the white throughout the years. In 1920 the adjusted crude rates indicated there were 26.9 white children for each 1,000 persons in the white population. In the same year, the nonwhite crude birth rate was 35.0. Table 6 shows the crude birth rates for selected years from 1940 to 1957. The larger differential between the white and nonwhite population is apparent from the crude rates, but the spread in rates does not indicate a clear trend. In the refined birth rates or the fertility rate, the spread between the rates has become progressively larger since 1940. Although both white and nonwhite portions of the population have increased the rate at which they have been reproducing, the nonwhite segment has increased its rate at a swifter pace.

When both the age-specific birth rates and age-specific death rates are applied to a group of 1,000 female infants, the resultant is the net reproduction rate. Barring the effects of immigration and emigration, the net reproduction rate is a relatively accurate index of the net reproduction expected through one generation. The net

TABLE 6

ADJUSTED CRUDE BIRTH RATES, REFINED BIRTH RATES, AND NET REPRODUCTION RATES FOR THE UNITED STATES, BY COLOR: 1940-1957[a]

Year	Crude Rate[b]		Refined Birth Rate[c]		Net Reproduction Rate	
	White	Nonwhite	White	Nonwhite	White	Nonwhite
1940	18.6	26.7	77.1	102.4	1,002	1,209
1945	19.7	26.5	83.4	106.0	1,106	1,323
1950	23.0	33.3	102.3	137.3	1,387	1,780
1955	23.8	34.7	113.2	155.1	1,613	2,097
1957	24.1	35.2	117.4	163.4	1,697	2,200

[a]Data from U. S. Bureau of the Census, Statistical Abstract of the United States: 1959, pp. 52-53, 56.

[b]Crude rates are adjusted for underregistration.

[c]Number of children per 1,000 women aged 15 to 44 inclusive.

reproduction rates in Table 6 indicate a progressively larger increase in the rates of the nonwhite population than in the rates of the white population.

Age Differentials.--In 1957, each group of 1,000 women aged 20 to 24 inclusive had 257.6 children. The rate for women aged 25 to 29 was 200.5. The rate drastically dropped for women in age brackets below age 20 and in age brackets above 30. The 1957 pattern of rate distribution by age is typical of all the years since 1940. In 1940 the

women aged 20 to 24 had the highest rate, 135.6, and the next highest rate (122.8) was for women aged 25 to 29. In no year since 1940 has there been a higher rate than 1.0 children for each 1,000 women aged 10 to 14. At the other end of the age scale the highest rate for mothers aged 45 to 49 was in 1940 when 1.9 children were born for each 1,000 mothers in the group. In 1956 and 1957 the rate stood at 1.0 for each 1,000 mothers aged 45 to 49.[1]

In summary, the fertility of the nation is measured in several different ways. The crude birth rate has become much more adequate since registration procedures have greatly improved throughout the nation. The refined birth rate is more indicative of changes which occur because it bases the rate on that segment of the female population which is in the reproductive years. Similarly the fertility ratio is based on the female population which is in the reproductive years, but it uses a child population aged 0 to 5 instead of a child population under one year old. It can be derived from the decennial Census material and can therefore provide broader population comparisons. The net reproduction rate is an index of population growth or decline because it utilizes both birth and death rates. It also is based on the female population in

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[1] Ibid., p. 56.

the reproductive years. Rural areas have much higher rates than urban areas. The remote sections of the nation have the highest rates of reproduction. Although not fully understood, it would seem logical that the narrowing of the urban-rural spread in reproductive rates is caused by an increase in the homogeneity of the two ways of life. Reproduction rates are higher for the nonwhite segment of the country and, as shown by the refined birth rate, the spread is becoming greater. The great majority of children are born to women between the ages of 20 and 30; the rates drastically decline for all other age groups.

Mortality

Early in 1900 the original death registration area was established. It contained ten states and the District of Columbia. The ten states were Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Michigan, and Indiana. Gradually more states were added until in 1933 Texas became the last state to start regular reporting of deaths to the Bureau of Public Health.[1]

Death registration also has suffered from underregistration and failure to register according to residence. Most

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[1] Smith, op. cit., pp. 146-47.

states have adopted laws requiring registration of death within 72 hours after death. Nevertheless, deaths in sparsely populated areas have been underregistered. The failure to register deaths according to residence was particularly noticeable in towns and cities which had large state hospitals and rest homes. If the practice of allocating deaths to place of occurrence persisted, hospital and rest home centers would have death rates much in excess of reality. Like the registration of births, the recording of deaths is now done by residence.[1]

Death Rate.--The crude death rate is the number of deaths in one year for each 1,000 persons in the total population. Like the crude birth rate, the crude death rate is quite useful, but it is not nearly as accurate an index as death rates that have been adjusted for age and sex composition of the population.

Since 1900 the crude death rate has declined steadily in the United States. In 1900 the rate stood at 17.2 deaths for each 1,000 persons; by 1920 it had reduced to 13.0; in 1940 it was 10.8; and in 1957 it stood at 9.6 deaths per 1,000 persons.[2]

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[1] Ibid., p. 147.

[2] U. S. Bureau of the Census, op. cit., pp. 60, 63.

For the death rate to be as low as it has been in the past decade, the population of the nation must be increasing rapidly. In a stationary population the number of births would equal the number of deaths. If a person could be expected to live for 80 years, the death rate for such a stationary population would be 12.5 per 1,000 population. But because the nation was growing rapidly, the concentration of persons in the younger years allowed the rate to go lower.[1] For example, in 1956 a person at birth could expect to live 69.6 years. In a stationary population the death rate would be the reciprocal of 69.6, or 14.4 deaths per 1,000 persons. In order for the actual death rate of 9.4 deaths per 1,000 persons to occur in 1956, the population was expanding prodigiously.

Expectation of Life.--The expectation of life was referred to above. The concept is a basic and very useful one to the study of people. The expectation of life is the arithmetic mean of the ages at death of a group of persons born at the same time. If the average age of death were found for a group of persons born in the same year, then the average age of death found for the surviving group who start the next year together, and for each subsequent year, the

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[1]Smith, op. cit., p. 150.

resultant tabulation would be a life table. In actuality the years of expected life are calculated by applying the age-specific death rates to each age. Thus life expectancy is found on the assumption that factors responsible for deaths will remain the same as they are in the year in which the computations are made.[1]

Residential Differentials.--According to crude death rates the rural portions of the nation seem to have a decided life advantage. For example, the urban crude death rate declined from 11.5 in 1940 to 10.8 in 1949, a decrease of about 6 percent. The rural death rate declined from 9.8 to 8.9, or about 9 percent, during the same time period. The differential is undoubtedly not as great as the crude rates indicate. The age composition of the rural areas favors the young and therefore would have a tendency to make the rates lower in those areas. Some of the discrepancy can be accounted for also by less complete registration of deaths in rural areas than in urban areas.[2]

The geographic regions of the United States exhibit pronounced differences in crude death rates. In 1957 the Mountain region had the lowest rate, 8.2; New England, with

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[1]Smith and McMahan, op. cit., p. 248.

[2]Gist and Halbert, op. cit., pp. 245-46.

a rate of 10.9, had the highest. The differences in death rates, however, were generally proportional to the median ages of the geographic divisions. The Mountain region not only had the lowest death rate, but it also had a low median age of 26.0. New England had the highest median age of 31.8.[1]

Color and Sex Differentials.--The death rates for the nonwhite portion of the population have been consistently higher than the rates for the white segment. The range between the white and nonwhite portions of the population is decreasing progressively. Since 1950 the white population rates have been stable with only slight yearly deviations, but the nonwhite rates have continued to decline.

There are large deviations in the crude death rates of both males and females in both white and nonwhite populations. Longevity tables are always prepared to differentiate between male and female because of the large rate span between them. Although life expectancy varies some from state to state for each age bracket, the tables for the various states are relatively consistent. In no state nor in any specific population within the United States has the male segment had a longer life expectancy than the female segment of the population.

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[1]U. S. Bureau of the Census, op. cit., p. 64.

TABLE 7

CRUDE DEATH RATES FOR THE UNITED STATES, BY COLOR AND SEX: 1910-1958[a]

Year	United States			White			Nonwhite		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1910	14.7	15.6	13.7	14.5	15.4	13.6	21.7	22.3	21.0
1930	11.3	12.3	10.4	10.8	11.7	9.8	16.3	17.4	15.3
1950	9.6	11.1	8.2	9.5	10.9	8.0	11.2	12.5	9.9
1958	9.5	11.0	8.1	9.4	10.9	8.0	10.3	11.6	9.1

[a]Data from U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959), p. 63.

Age Differentials.--The decrease in death rates has been spread throughout all age groups to some degree. The crude death rates in Table 8 show the continual reduction in the rates for all age groups up to the age of 85. But one must not view the figures without caution. As indicated in the discussion of death rates, the decrease may be caused largely by the changing age composition. The decrease also may be partially attributed to improved health habits and sanitary conditions. The latter causes represent true gains in the reduction of the death rates. In Figure 5, the age distribution of the crude birth rates is shown for both male and female populations for 1957. Graphically, the high rates of the

TABLE 8

CRUDE DEATH RATE FOR THE UNITED STATES BY AGE GROUPS: 1910-1958[a]

Year	Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
1910	131.8	14.0	2.9	4.5	6.5	9.0	13.7	26.2	55.6	122.2	250.3
1930	69.0	5.6	1.7	3.3	4.7	6.8	12.2	24.0	51.4	112.7	228.0
1950	33.0	1.4	0.6	1.3	1.8	3.6	8.5	19.0	41.0	93.3	202.0
1958	29.8	1.1	0.5	1.1	1.4	3.0	7.5	17.3	41.3	87.8	202.7

[a]Data from U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959), p. 63.

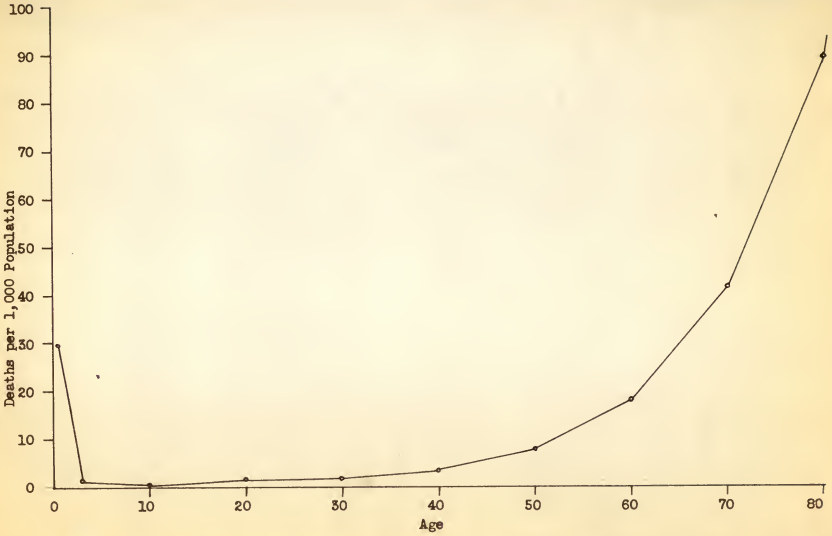

Fig. 5. — Crude death rates for the United States by age: 1957. Data from U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959), p. 63.

extremely young and the aged are vividly contrasted with the low rates of teenagers and young adults.

Infant Mortality.--As seen in Figure 5 and Table 8, the children under one year old still have a high mortality rate. Excluding fetal deaths, the death rate in 1957 for infants under one year old was 26.3 per 1,000; for the white population the figure stood at 23.3 deaths per 1,000 infants; the nonwhite population had 43.7 deaths per 1,000. The figures show a substantial gain since 1948 when the total rate was 32.0--29.9 for white and 46.5 for nonwhite. Of the nonwhite infant population in 1957, 95 percent were Negroes. The Negro infant mortality rate was 44.2. It was exceeded only by the American Indian rate of 56.9 deaths per 1,000 infants.[1]

Causes of Deaths.--Not all of the decline in deaths can be attributed to the outstanding fight against disease which has taken place in the twentieth century, but medical science has lowered death rates significantly for some diseases. At the turn of the century tuberculosis was the major killer, but by 1957 it had been relegated to fifteenth place as a cause of death. Tremendous reductions in deaths

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[1]U. S. National Office of Vital Statistics, op. cit., Table CS, p. cxl.

caused by diphtheria, whooping cough, measles, and other childhood diseases have been made since 1900. All the childhood diseases had death rates of less than one person for every 100,000 population. The fight against diseases prevalent in old age has been much less successful. Diseases of the heart, cancer, arteriosclerosis, and others have been increasing.[1]

The ten leading causes of death along with the death rates per 100,000 population are listed in Table 9. As would be expected, the death rates for diseases which occur in old age and early infancy are much higher than the rates for other causes. Although diseases of early infancy ranked as the fifth largest killer in 1957, there has been a great reduction in deaths in this category since 1900, when the rate stood at 62.6 deaths per 100,000 population. Deaths caused by influenza and pneumonia also have been drastically reduced. In 1900 the rate was 202.2 as compared with 35.8 in 1957.[2]

Accidental deaths occur principally as a result of motor vehicle accidents. Of the 56.0 persons per 100,000 population who met death by accidents in 1957, 40 percent or

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[1] U. S. Bureau of the Census, op. cit., p. 66.

[2] Ibid.

TABLE 9

DEATH RATES PER 100,000 POPULATION FOR THE 10 LEADING CAUSES OF DEATHS: 1957[a]

Cause	Rate
Diseases of heart	369.1
Malignant neoplasms	148.7
Vascular lesions affecting central nervous system	110.2
Accidents	56.0
Certain diseases of early infancy	39.1
Influenza and pneumonia, excluding pneumonia of new-born	35.8
General arteriosclerosis	35.8
Diabetes mellitus	19.5
Congenital malformations	12.8
Cirrhosis of liver	11.3

[a]Data from U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959), p. 67.

22.7 persons per 100,000 died in motor vehicle accidents. Falls accounted for the deaths of 12.1 persons out of each 100,000 population. The third highest cause of accidental deaths was fire and explosion of combustible material, with a death rate of 3.7 persons per 100,000 population.[1]

In summary, mortality is measured by crude and specific death rates and by life expectancy tables. The life tables utilize specific death rates to ascertain the average

[1]Ibid., p. 69.

number of years a person may expect to live at each age. Although at one time urban areas had higher death rates than rural areas, it has become increasingly clear that with complete registration and adjustment for age and sex there is little rural-urban difference. The regional differences in death rates are directly proportional to the median ages of the various regions. The nonwhite population has higher rates than the white. Infants have relatively high rates. Children and young adults have low rates, but for persons over 65 years old, the rates climb swiftly. Diseases of the heart and cancer are the most frequent causes of death. Medical progress has greatly reduced the death rates of most diseases, except those which are usually associated with old age.

Fertility, Mortality, and Industry

The vital processes of fertility and mortality vary among social groups. It has been seen that birth rates and death rates differ considerably between white and nonwhite groups. The birth rate is much higher in rural areas. Although little research has been conducted and the information is scant, the relationship of industry to fertility and mortality will be discussed in this portion of the chapter.

Fertility

There seems to be an inverse relationship between fertility and the economic status of the population. Low income families have more children on the average than do high income families. The number of children ever born for each 1,000 women aged 15 to 44 by income of husband is shown in Table 10. Although the relationship is not direct, the rates in the lower income brackets are considerably higher than those in the higher brackets.

TABLE 10

NUMBER OF CHILDREN EVER BORN PER 1,000 WOMEN AGED 15 TO 44, BY INCOME OF HUSBAND: 1957[a]

Income Group	Children Ever Born[b]
Under $1,000	2,834
$1,000 to $1,999	2,868
$2,000 to $2,999	2,457
$3,000 to $3,999	2,343
$4,000 to $4,999	2,199
$5,000 to $6,999	2,205
$7,000 and over	2,141

[a]Data from U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959), p. 57.

[b]Standardized for age of women.

Income is indicative of industrial status in the broadest sense only. That is, there is no direct and visible association of income to particular occupations or industries. But income is a general index of the level of work performed.

Using data supplied by the Bureau of the Census, Dinkel compared occupational class and fertility in 1900 and in 1940. His study was guided by the hypothesis that occupation is related to fertility. Of the nine major occupational categories listed by the Census Bureau, Dinkel found only four broad classes of socio-economic rank.[1] He grouped professionals, clerks, and proprietors in the first class, service and craft workers in the second class, operatives and laborers in the third class, and farm owners and farm laborers in the fourth class. He found that Class 1 had the lowest fertility, Class 2 had the next lowest, and that Class 4 had the highest fertility in both 1910 and 1940. The data indicated that there was definitely a differential between the fertility rates of unskilled and those of skilled workers. Dinkel believed the correlation existed because occupations are indices of general styles of living. People who work

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[1]The major occupational categories as designated by the Census Bureau are listed in order of social prestige and economic status. See Chapter VIII on stratification and Chapter XI on social mobility for analysis of rank.

at certain occupations tend to hold homogeneous values.[1]

Census data subsequent to Dinkel's study are shown in Table 11. The data for 1950 are given by color. The nonwhite bias is evident in all occupation groups except service workers. Nonwhite farmers and farm managers have fertility rates much higher than white workers in the same occupations. Some of this difference no doubt should be relegated to the farm laborers and foremen category because of the poor classification procedures regarding Negro sharecroppers and share tenants.[2]

Occupational differentials remained essentially the same from 1940, when Dinkel did his study, until 1957. The professionals, clerical workers, and salesmen all have very low rates of fertility. Farm personnel have the highest rates. Operatives and laborers also have high rates, but not nearly as high as farmers.

Women who are not in the labor force have much higher fertility rates than women who are working. In 1950, there were 744 children ever born per 1,000 white women aged 15 to 44 who were members of the labor force. There were

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[1]Robert M. Dinkel, "Occupation and Fertility in the United States," American Sociological Review, XVII (April, 1952), 178-83.

[2]See Chapter II. See also Smith, op. cit., pp. 278-85.

TABLE 11

NUMBER OF CHILDREN EVER BORN PER 1,000 WOMEN AGED 15 TO 44, BY OCCUPATION OF HUSBAND: 1950-1957

Major Occupation Group	1950[a]			1952[b]	1957[c]
	Total	White	Nonwhite		
Professional, technical, and kindred workers	1,522	1,521	1,542	1,661	1,996
Farmers and farm managers	2,686	2,529	3,862	2,785	3,149
Managers, officials, and proprietors, except farm	1,746	1,746	1,736	1,870	2,209
Clerical, sales, and kindred workers	1,451	1,447	1,588	1,549	1,967
Craftsmen, foremen, and kindred workers	1,883	1,877	2,025	1,961	2,333
Operatives and kindred workers	1,905	1,888	2,086	2,019	2,422
Service workers, including private household	1,723	1,745	1,647	1,810	2,277
Farm laborers and foremen	2,371	2,331	2,537	2,734	3,729
Laborers, except farm and mine	2,118	2,091	2,177	2,277	2,649

[a]Data for 1950 from U. S. Bureau of the Census, U. S. Census of Population: 1950, Vol. IV, Special Reports, Part 5, Chap. C, Tables 28-29.

[b]Data for 1952 from U. S. Bureau of the Census, Statistical Abstract of the United States: 1955 (Washington, D. C.: Government Printing Office, 1955), p. 45.

[c]Data for 1957 from U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959), p. 57.

1,673 children per 1,000 white women who were not in the labor force. The figures indicate that white women prefer to stay home and those who do work have relatively low fertility rates.

The labor force status of the nonwhite woman was different in 1950. About 40 percent of the nonwhite female population aged 15 to 44 were in the labor force. There were 1,176 children ever born per 1,000 nonwhite women of reproductive age in the labor force. Those who were not in the labor force had a rate of 1,840 children per 1,000 women. The white women who were not in the labor force had a rate more than twice as high as the white women who were workers. The nonwhite women who were not in the labor force had a rate only slightly higher than one and one-half times the rate of the workers. The nonwhite women who worked had a rate almost one and one-half times the rate of white women who worked.

Mortality

Industry has been interested primarily in the fight against disease. Dust, gases, lighting, and other features of industry which affect the health of workers and indirectly affect mortality are constantly being studied and improved. Hospitalization and life insurance are sought frequently

in lieu of pay raises by unions. Most industries maintain a health suite or first aid room. Literature on good health practices and safety practices is distributed among workers. Films and lectures are presented to workers in the fight against accidents.

In 1957, 95.2 percent of the total labor force were between the ages of 15 and 65. In that same year, only 33.7 percent of all deaths occurred in the same age bracket. The death rates as shown in Figure 5 are extremely low for all age groups from 15 to 55. The death rate for persons 45 to 54 was only 7.6 deaths per 1,000 population. The rate for the next age bracket of 55 to 64 jumped to 17.8. It is evident, therefore, that most deaths of persons in the labor force occur between the ages of 55 and 65. People in that 10-year age bracket of 55 to 65 comprise 12.4 percent of the labor force and 48.6 percent of all deaths.[1]

Fatalities caused by work accidents are tabulated by the Department of Labor. In 1950 there were 15,500 fatalities caused by work accidents, in 1953 there were 15,000, and in 1957 there were 14,200. Of the nonagricultural industries, construction industries have had the most

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[1]U. S. Bureau of the Census, Statistical Abstract . . . 1959, pp. 63, 207.

accidental deaths each year since 1953. In 1957 there were 2,500 accidental deaths in the construction industries. In the same year the manufacturing industries had only 2,000 accidental deaths. Since there were more than four times as many employees in manufacturing as in construction, the extremely high rate of deaths in construction is apparent. Agriculture had the highest total number of accidental deaths, but proportionately the number was still much lower than the number of construction deaths. The safest group of industries in which to work in 1957 was the wholesale and retail trades.

Fertility, Mortality, and the Industrial Arts Program

The demographic analysis of fertility and mortality in the United States reveals much information which has implications for the industrial arts program. The eleven significant facts below are grouped to facilitate the discussion.

1. The general economy and well-being of the nation are reflected in its birth rates.

In periods of depression, the birth rate declines and in periods of prosperity, the rate rises. The birth rate serves as an index of family welfare. Industrial arts

education has the responsibility to help youngsters to understand the ways in which the basic institution of the family is affected by lack of work and abnormally low income. It must help them to understand the social effects of changed behavior reflected in the restriction of the size of the family. The schools must seek to understand ways in which industry and society combat depression and inflation.

2. Fertility rates are highest in rural-farm areas and lowest in urban areas.

3. Regionally, birth rates are high in extremely rural and mountainous areas.

4. Occupational groups which have relatively low incomes have the highest birth rates.

5. Professional and white collar workers have relatively low birth rates.

The disproportionately high birth rates in rural and remote areas reflect mores and a level of living which deviate from those of the larger society. The economy of the rural and remote areas has not changed relatively with the total economy. The people in these areas are less dependent upon specialization and division of labor. But the schools in such areas must recognize that many of the children will move to more industrialized areas as young adults and prepare

them for the transition.[1] Occupational status is correlated with fertility primarily because occupations are excellent indicators of economic status. Laborers, operatives, service workers, and farm hands represent groups with low incomes. Living in spatially restricted areas, low levels of education, and high proportions of groups against which society discriminates, all contribute to a way of life which deviates from middle-class standards. Industrial arts education must help the students to understand these social effects of occupations; it must help them to see the fertility variations as a reflection of a way of life which is controlled, to a great extent, by a person's occupation.

6. Birth rates are higher in the nonwhite population than in the white population.

7. Death rates are higher in the nonwhite population than in the white population.

Most Negroes and other nonwhites are employed in the laboring and low-class occupations. The social and economic conditions of the home life are reflected in the high birth rates. The high death rates are also a reflection of the poor living conditions in which so many nonwhite families rear their children. High death rates are frequently caused

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[1] Cf. supra, p. 69.

by the heavy, laborious work of the nonwhite population. The industrial arts program can help the students of all races to understand the role industry and its occupations play in creating the social conditions which exist.[1] Youngsters in industrial arts classes should seek the reasons why the Negro death rates are now declining faster than the white rates and the way industry has influenced the change.

8. Women have longer life-expectancy rates than men.

9. Death rates in the labor force are low until the age of 55.

10. Death rates are highest in diseases connected with old age.

11. Safety procedures and devices have caused the total number of accidental deaths to decline; the construction industries have extremely high accident rates compared to other industries.

The type of work a person does can greatly affect the number of years he lives. The long life-expectancy of women can be partly attributed to occupations free from

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[1]The new social conditions also give rise to changes in industry. In other words, society and industry are in an observable interaction, except in periods of prolonged cultural lag. Cf. infra, Chapter XIV.

strenuous labor. Most frequently work affects death indirectly by causing deterioration in the physical system of the individual, usually extending over a period of time. The industrial arts program in its study of occupations must seek the effects upon the health and life-expectancy of its workers. On the other hand, industry has contributed to the fight against many diseases; it has sought more healthful working conditions. Safety engineering has greatly reduced accidental deaths within the work plants and in society. Many products are aimed directly at the reduction of accidents in the community. Industrial arts students should learn of the progress in preventing accidents and deaths and industry's contribution to the program. They should seek ways of applying the safety procedures and healthful practices of industry to their own classrooms and lives.

In summary, the following implications seem to be basic. First, because birth rates are reflections of the economic well-being of the nation, because of the residential differences in birth rates, because of the high birth and death rates among the nonwhite population, and because of the low fertility rates of professional and white collar workers, the industrial arts program must foster the understanding of occupations and industries as basic determinants of various levels of living. Second, because fertility and

mortality rates vary regionally, because fertility and mortality rates are high among the nonwhite population, and because mortality rates differ considerably by sex, industrial arts education should be offered for all students regardless of residence, race, or sex. Third, because mortality rates vary according to residence, because industry affects death rates indirectly through health, and because industry affects death rates directly through safety education and practices, the industrial arts program must include safety and health education.

CHAPTER V

MIGRATION

Migration is a major source of population change. Along with births and deaths, it accounts for the number and distribution of the population. Its influence is, indeed, far-reaching. Migration causes maladjustments, accommodations, and often conflict. It creates the need to facilitate assimilation. Some of the effects of migration on social processes will be discussed in subsequent chapters. This chapter will be concerned primarily with the demographic aspects.

Migration does not directly change the population of the world. However, it may indirectly affect rates of births and deaths by the movements of people into cultures which cause changes in fertility or mortality rates. Since migration usually accompanies a change in social status, change in the cultural milieu is expected. If the change in social status is upward, both fertility and mortality rates are likely to decline.

Migration is the movement of the population through physical space. Usually all changes of residence are considered a form of migration. When a sedentary type of living is predominant, the conception of migration as any residential change is logical. However, when the society has large numbers of nomadic people, migration so defined becomes an anomaly. The United States is primarily a sedentary nation, but the tendency to be territorially mobile is increasing. Consequently, some scholars have urged that a more minutely differentiated meaning be given to various types of moves. For example, a person who moves across the street is changing residence but is not really migrating. Even when a move across a selected political boundary is used to study migration, fringe cases appear. The person who moved across the street could well be crossing into the county from the city.[1] For lack of a more refined methodology, students of migration have used (1) all residential moves or (2) residential moves across political boundaries to describe migration.

Migration and the United States

The two basic types of migration are the international and the internal. International migration includes both

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[1] T. Lynn Smith, Population Analysis (New York: McGraw-Hill Book Company, 1948), pp. 293-94.

immigration and emigration. Internal migration may be the flow of persons between states, between rural and urban areas, between cities, or between farms; it may be the continuous flow of transient workers.

Immigration and Emigration

The United States frequently has been referred to as the melting pot of other cultures. It has received immigrants from all parts of the world, but mostly from the countries of Europe. The United States, however, has contributed rather insignificant numbers to other countries, except for its own territories. Before becoming states, Hawaii and Alaska received large proportions of persons leaving the continental United States.[1] In 1957 a total of 23,933 persons left the United States to take up permanent residence in other countries. Of this total, 10,363 persons went to Europe, 3,006 to Asia, 8,687 to other countries in the Americas, 496 to Africa, and 210 to Australia. Of the persons who went to Europe, England and Germany received the largest numbers.[2]

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[1]Arnold M. Rose, Sociology: The Study of Human Relations (New York: Alfred A. Knopf, 1956), pp. 381-82.

[2]U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959), p. 94.

Immigration was slow in the nation's infancy. The great majority of persons came from England and northern Ireland. French and Spaniards entered the United States by large numbers because of the annexation of territories in which they lived. Large numbers of Negroes entered through the trade of slaves from central Africa. Large numbers came from the Netherlands in search of religious freedom. Germany and Poland contributed in much smaller numbers.[1]

Immigration progressed unrestricted until about 1830, with agitation for restriction developing in the latter part of the 1820's. Starting about 1830, some states began restricting the immigration of undesirables. One of the most important factors causing widespread agitation for restriction and state control was the tremendous influx of paupers, criminals, prostitutes, and other undesirables. Many had their passage paid by their home communities to be rid of them. In 1838 the Secretary of State, John Forsyth, made a voluminous report on the subject of transported paupers and other undesirables.[2]

During the period of the 1840's, the flow of immigrants reached almost three times the number who had come to

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[1] Rose, op. cit., pp. 382-83.

[2] Smith, op. cit., p. 309.

the shores of the United States in the previous decade. From the beginning of 1841 through 1850 there were 1,713,251 immigrants entering the country through regular ports. This figure does not include the large numbers of persons who entered the country by land.[1] The increase was caused in part by serious crop failures in Ireland and by the failure of a revolution in Germany. Both the Irish and the Germans had a tendency to be clannish. Primarily agriculturists, the Irish and Germans tended to group themselves into large farming communities, using methods of farming peculiar to their home countries.

The peoples of northern Europe continued their ingress by large numbers and, starting in the 1870's, were augmented by even larger numbers of Italians, Russians, and other peoples of southern and eastern Europe. The depression of the 1850's and the Civil War tended to slow down immigration to some extent. In the years following the war, the demand for cheap labor enticed large groups of immigrants to work in factories and on the westward-moving railroads. During this era phenomenal industrial growth took place in the northern part of the nation. The industrial revolution in America demanded cheap labor; the industrial revolution

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[1]U. S. Bureau of the Census, op. cit., p. 91.

in northern Europe caused depression and impoverished conditions in southern Europe. Nearly three million people migrated to the United States during the 1870's. The tide continued to mount. Hicks described the pull and push forces which caused the large numbers of Europeans to leave their home countries for America:

> . . . So economical was it to employ these immigrants that manufacturers sometimes combined to send agents abroad to recruit the supply. Such urging, however, was of far less consequence than the general dislocations in Europe resulting from the economic revolution. Men thrown out of work, or unable to find it, looked longingly toward the greater opportunities of America, which the diminishing cost of ocean transportation brought more and more frequently within their grasp. . . . Official stimulation came from the American side, both by way of liberal bounties for those who would volunteer to serve in the army, and by an immigration act, passed in 1864, which allowed the importation of laborers under contracts not particularly different in principle from the contracts that in colonial times had brought so many indentured servants to America.[1]

Agitation for federal control reached a peak in the early 1880's, and federal restrictive legislation was inaugurated in the Act of August 3, 1882. This act required that convicts, lunatics, idiots, paupers, criminals, and diseased persons be prohibited from landing. During the year 1882, the number of aliens coming to the American

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[1]John D. Hicks, The American Nation (Boston: Houghton Mifflin Company, 1946), p. 72.

shores continued to rise; a total of 788,992 immigrants entered the country in that year. Each year Congress stiffened the laws and increased the list of undesirables. Finally in 1917, over Wilson's veto, Congress passed a bill requiring aliens to be capable of reading either the English language or some other language or dialect.[1]

The literacy test soon proved to be ineffective. After World War I, transportation was again available to those who wished to ameliorate their plight by voyaging to America. In 1921, Congress passed a discriminatory act, placing a numerical ceiling upon immigration. Each country's quota was 3 percent of the number of people born in that country who resided in the United States at the time of the 1910 Census. In 1924, the formula was changed to 2 percent of the population of persons from the various countries as determined by the 1890 Census. The 1924 act also provided that, beginning in 1929, the quota of any country would have the same ratio to 150,000 as the number of persons of that nationality residing in the United States had to the total population at the time of the 1920 Census. The Immigration and Nationality Act of 1952 based the annual quota on

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[1]E. P. Hutchinson, "The Present Status of Our Immigration Laws and Policies," in Postwar Problems of Migration (New York: Milbank Memorial Fund, 1947), pp. 82-85.

one-sixth of one percent of the population of that nationality in the Census of 1920.[1]

The Act of 1924 distinguished between quota immigrants and nonquota immigrants. The latter group was composed of spouses of citizens, immigrants from Canada, Mexico, and other free countries in the Western hemisphere, ministers and professors who were entering to practice their professions, and students who had been admitted to accredited institutions and approved by the Secretary of Labor. An extremely beneficial aspect of the 1924 act was the requirement of a visa from the United States consul before admittance would be granted. The regulation prevented would-be immigrants from being turned back after reaching the shores of the United States. The act also prohibited entrance, with some exceptions, of those persons who were ineligible to become naturalized citizens. Since naturalization was limited to the Caucasian and black races, the Japanese, Chinese, and other Asiatic peoples were almost completely prohibited.[2] With few changes in quotas set by subsequent laws and Presidential proclamation, the Act of 1924 is essentially unchanged today.

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[1]U. S. Bureau of the Census, op. cit., pp. 87-88.

[2]Smith, op. cit., pp. 312-13.

The effect of the Act of 1924 is not very certain. There is no doubt that the great depression of the 1930's affected the flow of migrants to the United States. As shown in Table 12, the net flow was reversed for the period of 1931 to 1935. The tide again turned, but the flow was held in check by slowly improving economic conditions.

TABLE 12

IMMIGRATION AND EMIGRATION FOR THE UNITED STATES: 1911-1955[a]

Period of Years	Immigration	Emigration	Net Immigration
1911-1915	4,459,831	1,444,530	3,015,301
1916-1920	1,275,980	702,464	573,516
1921-1925	2,638,913	697,397	1,941,516
1926-1930	1,468,296	347,679	1,120,617
1931-1935	220,209	323,863	- 103,654
1936-1940	308,222	135,875	172,347
1941-1945	170,952	42,696	128,256
1946-1950	864,087	113,703	750,384
1951-1955	1,087,638	134,220	953,418

[a]U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959), p. 91.

World War II continued to restrict the ingress of persons from other lands. Immediately following the war the tide again began to rise, and the data indicate that there may be

well over a million immigrants for the years 1956 through 1960. From 1948 to 1958 almost 500,000 displaced persons and refugees were allowed to enter the United States. These persons have contributed greatly to the total number of immigrants within the past decade.

Internal Migration

Internal migration always has been a significant part of the American way of life. The western frontier served as a magnet to many pioneers seeking rich lands and a lesser degree of political dominance. Land grants, gold and silver rushes, and later oil strikes encouraged thousands of people to be on the move. During the industrial revolution, which is by no means ended, people by millions have migrated to the great industrial cities.

Internal migration involves the interchange of population among all segments of the nation. Several distinctive patterns have emerged from the migration of the nation. (1) There has been a westward movement which has not stopped with the closing of the frontier. (2) One of the greatest shifts has been the rural-urban exchange, which is constantly going on. (3) Interstate migration has included movements from city to city, farm to farm, and rural-urban shifts which cross the state lines.

Westward Movement.--The westward movement of population in the United States has been significant. Some of the white population were originally of Spanish descent and moved up from Mexico into the southwestern section of the nation, but most of the white population have moved from the East or are children of those who moved from the East. By 1930 approximately five million persons who were born east of the Mississippi River were living west of it. During the decade of the 1940's, the population of California grew 38.5 percent by net migration alone. Other states which have had large growths in population because of migration are Nevada, Arizona, Oregon, and Washington. Industrial expansion around large cities such as Seattle drew thousands of people westward during and after World War II.[1]

The Census Bureau calculates the center of population for the nation from the data collected in the decennial Census. The center of population is the geographic point about which the population is distributed. In 1800 the center of population was 18 miles west of Baltimore, Maryland. It has moved westward each decade. By 1900 it was six miles southeast of Columbus, Indiana. Continuing its westward push, the population, by 1950, was evenly distributed about a

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[1]Rose, op. cit., p. 385.

point eight miles north-northwest of Olney, Richland County, Illinois. The westward movement was considerably slower between 1910 and 1940 than it had previously been; however, the movement quickened again between 1940 and 1950.[1]

Rural-Urban Migration.--The rural-urban movement is not distinct from the westward movement; all categories of migration are somewhat overlapping. The rural-urban exchange is an extremely important part of the migration within the national boundaries.

From the analysis of the data in preceding chapters on population, fertility, and mortality, it has been pointed out that urban areas do not have their proportionate share of the children of the nation.[2] Urban areas depend on rural areas for part of their replacement and for all of their growth. The rate of fertility in farm areas has been extremely high, but the farm population has decreased. In 1920 the rural-farm population numbered 31,393,262 and in 1950, 31,181,325. Proportionately the decrease in farm population has been far greater.[3]

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[1] U. S. Bureau of the Census, op. cit., p. 9.

[2] Cf. supra, pp. 68, 104.

[3] U. S. Bureau of the Census, op. cit., pp. 16, 21.

Estimates of farm migration are made annually by the Department of Agriculture. Table 13 reveals the numbers of people moving to and from farms and the net migration from 1936 to 1958. When the great depression first struck, the net migration was to farms, but by 1936 the flow was again in the reverse direction. During the war years of 1941 to 1944, vast numbers left the farms to serve in the armed forces or to work in war plants. Immediately following the war, returning servicemen, dreaming of the good life on the farm, flocked to the rural areas of the nation. The years 1946 and 1947 showed a net increase in farm population through migration, but in 1948 people again began to move away from farms in greater numbers than they moved to farms. The total farm population has decreased continuously since 1948. In years in which economic slumps occurred, fewer people left the farm than in prosperous years.

Because the net result of farm migration is toward the urban areas, the large number of persons moving to farms each year is frequently overlooked. The number moving to farms reached a peak in 1946 with the return of servicemen and steadily declined each year thereafter. There have been less erratic fluctuations in the flow to farms than away from them. In the entire 22-year period from 1936 to 1958, there were never less than 448,000 persons moving to farms in any one year.

TABLE 13

FARM MIGRATION IN THE UNITED STATES: 1936-1958[a]
(Numbers in Thousands)

Year	Net Gain	To Farms	From Farms	Year	Net Gain	To Farms	From Farms
1936	- 799	825	1,624	1948	-1,686	1,016	2,702
1937	- 834	719	1,553	1949	- 371	1,171	1,542
1938	- 661	872	1,533	1950	-1,314	995	2,309
1939	- 545	823	1,368	1951	-1,302	597	1,899
1940	- 703	819	1,522	1952	- 271	643	914
1941	- 633	696	1,329	1953	-1,996	528	2,524
1942	-1,424	822	2,246	1954	-1,171	675	1,846
1943	-2,975	824	3,799	1955	- 91	544	635
1944	-1,563	1,095	2,658	1956	- 256	497	753
1945	- 564	916	1,480	1957	-2,236	459	2,695
1946	864	2,585	1,721	1958	93	448	355
1947	151	1,768	1,617				

[a]Data from U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959), p. 613.

Interstate Migration.--One method of studying interstate migration is to determine the movement by the information in the decennial Census on the state of birth. Admittedly the method is crude. A person may move many times, but only the state of his last residence and the state of his birth would be compared. Galpin and Manny made an extensive study by this method in 1934.[1] They found that the majority of the people who had moved from one state to another lived in contiguous states; comparatively few had moved farther away. Likewise the greatest number of persons moving to a state come from neighboring states. The greater the distance, the fewer the movers, whether to or from a state.

In the 1950 Census, information on internal migration was secured by asking whether or not the residents had been living in the same house in 1949. If the person had resided in a different house, the Census also listed whether or not the move was across a county line. Although the information obtained could not reveal the number of times one person moved in a ten-year period, it provided a basis for statistical estimates regarding migration. The data do not

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[1] Charles Galpin and T. B. Manny, Interstate Migrations Among the Native White Population as Indicated by Differences Between State of Birth and State of Residence (Washington, D. C.: Government Printing Office, 1934).

allow a distinction between habitual migrants or nomads and the more stable segment of the population. In 1950, 81.0 percent of the nation lived in the same house as in 1949. The Northeast was the most stable area, while the Mountain and Pacific regions had the majority of the movers.[1]

For the year from March 1957 to March 1958, the Census Bureau made statistical estimates of migration for the United States. Of the 167,604,000 people in the nation, 33,263,000 (19.8 percent) had moved to a different house. Of those who had moved, 66.2 percent moved within the same county, 17.0 percent moved to a different county within the same state, and 16.8 percent moved between states. It is evident, therefore, that the territorial mobility of the nation is mostly in small jumps and that state lines seem to present a definite barrier. Only 3.3 percent of the nation moved across state lines. The nonwhite portion of the population had a higher percentage of migrants than the white, with 25.1 percent and 19.2 percent, respectively. Rural-nonfarm residents had the highest percentage of residential moves; 22.7 percent of the rural-nonfarm population had moved during the year. The urban population had 19.6 percent and the rural-farm 14.4 percent. Of the people who

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[1]U. S. Bureau of the Census, op. cit., p. 37.

changed residences, those living in rural-nonfarm areas were more apt to move between states than were urban or farm people.[1]

Another phase of the interstate migration is that caused by the migratory laborers and transient workers. Farm hands who follow the crops in harvest move in definite patterns.[2] Railroad men, musicians, and lumbermen are some of the other groups constantly on the move. Since such groups are primarily occupational, they will be discussed in more detail later in the chapter.

Selective Factors of Migration

Migration in the United States has been selective with respect to race, age, and sex. Many studies have tested selectivity of migration in relation to physical fitness and intelligence.

Immediately following the Civil War, the Negro remained in the same district in which he had been a slave. As transportation improved and the Negro received some education, a few venturesome ones moved to cities in the North. By the turn of the century large numbers of Negroes were

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[1] Ibid., p. 36.

[2] Cf. infra, p. 134.

pouring into the cities of the nation, especially northern cities. Proportionately the growth of the Negro urban population has been considerably greater than the growth of white urban population. The Negro sharecropper in the South has a high rate of territorial mobility. Upon close scrutiny of the available data, it becomes evident that white farmers in the same economic status have a comparable rate.[1] Although migration has been selective by race, it is basically selective by social and economic conditions. Because of the social and economic conditions from which large numbers of Negroes have fled, Negroes have had higher rates of migration.

Migration is highly selective according to age. The great bulk of those who migrate to this nation and of those within the nation who move to the cities has been composed of persons less than 25 years of age. The increase in number of persons in late adolescence and early adulthood is revealed in the Census. If age-specific birth and death rates are applied to data from one Census to another, urban growth by migration can be approximated closely. Students who have made extensive studies by this method report that about three-fourths of rural-to-urban migration is attributable

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[1]Smith, op. cit., pp. 356-59.

to persons under 30 years of age.[1]

It has been established previously that the sex ratio in rural areas is much higher than it is in urban areas.[2] This is particularly true in late adolescence and early adulthood. Again, since age- and sex-specific rates can be applied to actual counts taken at the Census, it is possible to estimate with high confidence the sex ratios which should exist at specific ages. That females are predominant among migrants from rural to urban areas is the only reasonable explanation for the tremendous shift in sex ratios.[3]

Since about 1920, there have been many studies aimed at testing the association between intelligence and migration. The studies have produced conflicting results. Some have indicated that the more intelligent have a tendency to migrate to urban areas; others showed that the less intelligent are prone to migrate.[4] The discrepancy may be caused

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[1] Ibid., pp. 361-63. Also see Conrad Taeuber, "Recent Trends of Rural-Urban Migration in the United States," in Postwar Problems of Migration (New York: Milbank Memorial Fund, 1947), pp. 129-30.

[2] Cf. supra, p. 34.

[3] Smith, op. cit., pp. 363-64.

[4] See Gist and Halbert, op. cit., pp. 260-64 for summaries of many studies.

by the instruments used in the studies. Intelligence tests, on the whole, are known to be bookish; that is, they tend to reward book knowledge more highly than native capacity. Intelligence tests are also biased toward urban culture; they are made up of many questions pertaining to things and values which the farm person experiences only vicariously. If the study is based on social ratings such as Who's Who, it will be found that such listings are also biased.

Migration and Industry

Migration in the work world is of two distinct types. One type is characterized by the movement from one place to another, a change of residence because of a change in work position. The other involves an adherence to a kind of work which is not attached to a single work site. In the former type, migration is a change from the normality of a sedentary work life; in the latter, mobility is normal.

Place-to-Place Migration

A rough gauge of migration is the comparison of occupations in metropolitan centers which have been gaining rapidly in population with those in centers which have been

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[1]Smith, op. cit., pp. 365-67.

losing. Such comparison serves as only a rough gauge because (1) the migrants are usually young and still in the floundering period, (2) differential opportunities in industry are relatively short-lived, and (3) economically the cultures of the various centers differ minutely. Migrations have been related to broader cultural aspects such as the southern segregational system, increasing mechanization in agriculture, the dispersal of war plants, the development of hydroelectric power, or the shortages of housing.[1] Some migrations have been caused by the growth of new kinds of production; in recent years, however, the social organization of workers in the work plants through specialization and division of labor has served to minimize the effects of new types of production. Companies are constantly changing their products and methods in such a way that socially disruptive changes are few and far between.

Most moves are short moves within the same general area or county. In general, the tendency toward a long-distance move is inversely proportional to a person's occupational status. People who are most likely to migrate long distances are those who have few ties in the community.

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[1]Theodore Caplow, The Sociology of Work (Minneapolis: University of Minnesota Press, 1957), p. 90.

Such people are likely to have less tenure in office, less in the way of salable skills, and little personal property. Large numbers of operatives, laborers, and clerical workers are willing to move from one state to another.[1] Recognizing the stability in the socially higher occupations, most large industries pay the expenses involved in moving engineers, supervisors, and other managerial personnel.

One of the most thorough studies of labor migration in recent years was reported by Bogue. Through data supplied by the records of the Bureau of Old-Age and Survivors Insurance, trends in occupational migration and mobility are discernible. The data used were from the states of Ohio and Michigan. Migration in the two states was highly selective in respect to age. The peak of migration was reached at the age of 25 and thereafter declined steadily. Only a small fraction of workers under 25 remained with the same employer throughout the year, but not all of these job changes were migrations or changes of residence. The construction industires had the highest percentage of migrant workers during the year with about 20 percent; wholesale trade was next with about 12 percent. Male workers migrated more than females. The sex differential manifested itself in the

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[1] Ibid.

migration of nonwhites as well as whites. Workers in non-metropolitan areas tended to migrate more than workers in metropolitan areas. Each industry and metropolitan area seemed to develop its own pattern of migration.[1]

Transiency

Unlike other migrants who detach themselves from one place only to settle in another, the migratory laborer is constantly on the go. He follows definite paths in his pursuit of a wandering life. The migratory worker is a homeless person, barred from membership in any community. The migratory population is accepted as a unit of society; its existence is legitimate. Caplow emphasizes the acceptance of nomadism in the United States and the tremendous numbers of wanderers who may be on the road.

> . . . Homelessness has always been a legitimate status in the United States, and the hobo has a long history and a distinctive culture pattern. During lean years, the rather precarious institutions of Hobohemia . . . have always been able to accommodate an enormous number of newcomers, driven by poverty and unemployment to seek a limited fortune on the road. As it could be described in 1940, freight-riding was still a large-scale phenomenon: Between

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[1]Donald J. Bogue, A Methodological Study of Migration and Labor Mobility in Michigan and Ohio in 1947 (Oxford, Ohio: Scripps Foundation for Research in Population Problems, 1952).

ten and twenty thousand illegal train riders were apprehended daily on American railroads.[1]

Although the migratory worker represents an accepted status, he as an individual is not accepted. He is homeless and unwanted, save for his labor at a specified time. The President's Commission on Migratory Labor described this homelessness, free from nostalgia and fraught with hate and ugliness, in the following words:

> Migratory farm laborers move restlessly over the face of the land, but they neither belong to the land nor does the land belong to them. They pass through community after community, but they neither claim the community as home nor does the community claim them. Under the law, the domestic migrants are citizens of the United States but they are scarcely more a part of the land of their birth than the alien migrants working beside them.
>
> The migratory workers engage in a common occupation, but their cohesion is scarcely greater than that of pebbles on the seashore. Each harvest collects and regroups them. They live under a common condition, but create no techniques for meeting common problems. The public acknowledges the existence of migrants, yet declines to accept them as full members of the community. As crops ripen, farmers anxiously await their coming; as the harvest closes, the community, with equal anxiety, awaits their going.[2]

Migratory workers are segregated and differentiated from the community. They have to live in specially assigned

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[1] Caplow, op. cit., p. 91.

[2] President's Commission on Migratory Labor, Migratory Labor in American Agriculture (Washington, D. C.: Government Printing Office, 1951), p. 3.

places or shift for themselves in areas into which their poverty forces them. Tents, canvas attached to a car, crude shacks, flop houses, and cheap hotels shield them from the elements. They may sleep on pallets, on bedsprings, or on folding cots which they move with them.[1] The segregation is not merely a matter of poverty, but a way of life. Transient workers create their own culture--a world of cheap restaurants, pawnshops, burlesque shows, all-night movies, religious missions, recruiting offices, prostitution houses, park benches, barber schools, and second-hand stores. Such outward manifestations reveal deep-seated folkways and mores which drastically deviate from those of the over-all society.[2]

Racial discrimination is a significant contributory factor to the isolation of migratory workers. Skin color, language, and other physical features help to label many transients. Negroes, Mexicans, Puerto Ricans, and other groups are kept on the move because they are easily identified, segregated, and discriminated against. Large numbers of farm laborers migrate in racially segregated groups.

Estimates of the total transient population have been as high as 4,000,000.[3] Approximately 1,000,000 transient

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[1] Ibid., p. 4.

[2] Caplow, op. cit., p. 91.

[3] Ibid.

workers are agricultural workers who follow the crops. An estimated 40 percent of the migratory farm laborers are Mexicans who cross the Rio Grande illegally to find work in American fields.[1] Some such workers still follow the wheat harvest starting in Texas in June and ending in the Dakotas in August or in Canada in September. All along the path some workers are added and some are dropped, but the current remains strong. Another stream follows cotton out of Texas through New Mexico and Arizona and north through California, Oregon, and Washington harvesting melons, peas, and beets. From New Mexico, Texas, and Arizona a third stream starts with cotton and melons and then follows the sugar beet harvest north through Colorado and Wyoming into Montana. From out of the South, especially Louisiana, starts a strong current of transient workers following the berry crop up into the Great Lakes area. Along the eastern coastline, a stream of migratory farm hands starts with the citrus fruit in Florida and moves northward, picking peaches in Georgia and other fruit and truck goods as far north as New Jersey and New York. Farther inland, another stream of workers picking fruit and truck crops follows the mountain range through Tennessee, Kentucky, West Virginia, Virginia, Maryland,

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[1]President's Commission on Migratory Labor, op. cit., p. 3.

Pennsylvania, and New York. Along such distinct routes, farm workers move throughout the harvest season.[1]

The second group of occupations in the transient world is composed of those which are highly seasonal. Various types of construction work, such as bridge or road construction, are extremely seasonal. Lumbering and reforestation in northern lands are delayed for several months during the heavy snow season. Strip mining and canning are also seasonal, bringing in workers during the peak season and dismissing them as soon as the work slackens.[2]

A third group of occupations in the transient world is composed of the travelers. Diplomas, degrees, apprenticeships, and other credentials serve to stimulate mobility. To some workers such credentials are used to flounder about before settling down to more permanent positions. Many travelers are temporary members of Hobohemia. Their entrance into the ranks of transiency has no identifying marks, nor does it have any permanent stigmatic effect. People may avail themselves of the traveling facilities of Hobohemia without becoming permanent members.[2]

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[1]T. Lynn Smith, The Sociology of Rural Life (New York: Harper and Brothers, 1953), pp. 191-95.

[2]Caplow, op. cit., p. 92.

[3]Ibid., pp. 92-93.

A fourth group of persons in the transient world is the unemployed. The unemployed category includes those who are temporarily unemployed, the unemployable, and the partially employable. The lines are not clear-cut among the three types. In prosperous times, many who are partially employable have jobs. Alcoholics, the aged, and the physically handicapped may have steady work in periods of high employment. Some of the extreme cases of alcoholism, the physically and mentally disabled, and the extremely old and extremely young are never employable.[1] The unemployed mill about seeking work or a handout, sleeping on park benches or in flop houses, and seeking economical or free transportation.

The social consequences of transiency are truculent. The migrant lives in isolation and poverty. Social folkways and mores are developed which are inimical to those of the society at large. The dirty shacks, cheap bars, burlesque shows, cheap restaurants, pawnshops, houses of prostitution, and other aspects of the transient world contribute to the pathological consequences. The life of constant travel deprives its members of the amenities of stable social living. Eudcational, recreation, and religious facilities are

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[1] Ibid., p. 93.

generally lacking. Transient people do not have the time to develop social institutions or to participate in those of the community. Indeed, the community views the transient as an unwanted intruder.

Not all transient occupations are characterized by poverty, isolation, dependence, or old age. Dance band musicians, journeyman potters, professional thieves, and railroad men are transients who may be quite successful in obtaining substantial quantities of wealth. As a rule such persons do not remain in the same community for any length of time. The work requires an abnormal distribution of time. Thus the home life is erratic and disorganized. Knowing he will soon be on the move, the transient spends money on automobiles, clothes, parties, and other things which make no contribution to a permanent home.[1]

The transient occupational world is highly structured. Regardless of the antisocial influences discussed above, within the occupation there is a coherent and rigid structure founded upon extensive communication. There is a high degree of in-group solidarity or clannishness. Ready to band together for common interest, members possess a corresponding disinclination to associate, except in a formal way,

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[1] Ibid., pp. 95-96.

with outsiders. Children are reared with the notion that they will marry within the occupational group. The group has a well defined status system. Because of infrequent participation in the larger community, the group establishes an elaborate subculture. Privileges and rank which are conferred upon members establish the extent and quality of participation. The grapevine or communication system of the in-group is constantly fed with accurate gossip. Extensive vocabularies are utilized to maintain internal solidarity. A large majority of transient workers are single persons; the very nature of the work, the traveling, and the status system discourage marriage and family life. Sex mores are correspondingly less rigid.[1]

Occupational transiency in general encourages poverty and social conditions which are opposed to those of the larger community. Migratory workers are barred from membership in the community and usually are discouraged from staying any length of time in one place. Consequently, the internal structure of the migratory workers' society is explicit and stratified. Extensive communication fortifies the folkways and mores of the subculture.

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[1] Ibid., pp. 97-98.

Migration and Industrial Arts Education

The territorial movements of the population reveal significant features which have implications for the industrial arts program. The ten points listed below have been drawn from the foregoing analysis.

1. Throughout the years industry, economic opportunity, and freedom have been the main causes for immigration.

2. Migration is particularly heavy in prosperous years.

Industry and the national economy have been influential in drawing peoples to the shores of the United States. A free and open economy has allowed many immigrants to establish business and industrial enterprises. Industry has demanded cheap labor for the most economical production of goods. Slave and contract labor have contributed heavily to the immigration to the United States. Many immigrants today have made agreements with industry before leaving their native countries. The industrial arts program must foster an understanding of the world's interrelatedness and industry's role in it. In prosperous years immigration is heavy; industrial employment is high enough to absorb immigration and internal migration. In such years, large numbers of

individuals move from the farms of the nation into industrial employment. For years the farms have been producing more than the nation can use. In years of low industrial employment, marginal farmers remain in agriculture. Economic depression causes superannuation and restrictive hiring policies. Migration is thus regulated by world and national economy. The schools must help students to understand the pushes and pulls in the industrial economy which cause people to move.

3. The United States is still in the process of a westward movement of the residential population.

4. Migration usually occurs by short-distance moves.

5. Industry is constantly changing its products and methods in such a way that socially disruptive changes are few and far between.

The western frontier has drawn Americans from the East ever since Colonial times. The land rushes, gold rushes, and oil rushes served as magnets for large movements. Today the nation's population is still moving westward, but not in large groups. Industry is no longer tied to seaports and great railroad hubs for shipment of goods and materials. Electric power has freed industry from spatial confinement; industry, therefore, has been able to move westward. The

constant changes within industry keep radical changes in its population to a minimum. Ghost towns are less frequent because industry constantly deals with obsolescence instead of waiting for complete annihilation.[1] Small segments of a work force may be eliminated or retrained. People have the opportunity to move to other industries nearby, and migration usually takes the form of short-distance moves. The central business district may be moving toward the periphery of a city, or industry may move to the suburbs or open branch plants.[2] Workers may move with the industry movements or may be pushed through ecological growth. The industrial arts program can help students to understand the role of industry in promoting freedom of spatial movement, to understand industrial influences on the economy which promote population movements. Industrial arts students must learn and understand the human aspects of industy's avoidance of loss by obsolescence--to understand the need for constant change which causes a constant flow of short-distance moves.

6. Most migration is by young adults; migration from farms to urban areas is primarily by people less than 30 years old.

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[1] Cf. infra, Chapter IX.

[2] Cf. infra, Chapter VI.

7. The majority of migrants to the cities are young women.

8. Racial differences in migration are caused by social and economic conditions.

The rural sections of the nation support disproportionately large numbers of youth who move to urban areas as young adults.[1] More boys remain on the farms than girls. The schools must help the youth of both sexes to understand the industrial milieu into which they will move as young adults. Industry employs a high percentage of single women under 25 years old.[2] Young workers of both sexes experience a floundering period. They take several years to move from job to job in search of an industry and work in which to spend most of their remaining lives. Before they obtain a high degree of tenure and security, they feel the necessity to shift from industry to industry. The schools have an obligation to help these youngsters obtain a knowledge of the industries and occupations. The young people must be given the opportunity to know themselves, their abilities, and their potentialities in relation to industry and its occupations.

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[1] Cf. supra, pp. 69, 104.

[2] See Figure 4.

The industrial arts program must serve the over-all guidance program of the schools. The industrial education and guidance must be available to all youth, regardless of race. Much of the farm-to-city movement of the population is composed of Negroes. The nonwhite migration is primarily a function of social and economic conditions. Both white and nonwhite workers of low economic status move more frequently than those of higher status. The large industrial corporations, by their massiveness, encourage dissatisfaction and high mobility within the insecure laboring class.[1] Workers with low status, poor living conditions, and little property feel that they have little to lose and that there is the possibility of ameliorating their plight by moving. The industrial arts program can help students to understand the social and economic influences on mobility. It can help them to find more equitable ways of dealing with the problem of poverty and industry's and labor's role in combating useless migration. On the other hand, students can learn of the function of migratory workers in the economy and the steps the government is taking to mitigate the poor living conditions of the workers.

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[1]Cf. infra, Chapter XI.

9. The transient worker and his society deviate considerably from the larger society--social folkways and mores are inimical to those of the larger society.

10. Society recognizes homelessness as a legitimate status but rejects the migratory worker.

The plight of the migratory worker is now being studied by the United States government. Most migratory workers supply the unskilled labor for seasonal industry. The social rejection has caused the workers to form closely knit subcultures. Close proximity, poverty, isolation, and mistrust have helped develop mores and folkways which deviate from the larger community. Schools bulge while the workers are in town but many children of school age do not attend; it is difficult to enforce attendance in the transient population. Schools must find a way to reach these youngsters and help them to understand the larger society of which their society is a segment. They must be helped to understand the function and role of migratory workers and the ways in which the transient worker as well as his status can become acceptable. Transient workers perform routine work which may someday be replaced by automated machinery. Perhaps if the schools were able to develop each person to his fullest capacities, that day would be hastened.

Because of the high mobility rates of the nation, because of the farm-to-urban migration, and because of the differentials in migration by color and sex, industrial arts education must be offered for all adolescents regardless of sex, race, color, or place of residence. The high rates of migration among young adults and the practice of floundering from job to job for several years require the industrial arts program to function as part of the total guidance program to help students to understand themselves and industry. Because migration is highly associated with low social and economic status, industrial arts must help students to understand the role of industry and occupation in establishing social and economic levels of living. It must also foster an understanding of the ways in which industry and the individual can raise the level of living.

CHAPTER VI

ECOLOGY

The spatial utilization of land by man is remarkably similar throughout the United States and the world. If one were to board an airplane and fly over this sprawling country, he would discover many metropolitan areas, each with one city predominant in size and in structural aggregations; as he observed each urban area, he would note a cluster of buildings towering over the surrounding structures. There would be districts devoted primarily to commercial uses. Other districts would be utilized in the manufacture of goods. Large residential areas might have little or no land about the buildings, while others might have a considerable amount. Some districts would cater to entertainment or recreation. Areas might be highly utilized at one period and vacated at another during the span of the day. From continual observation of a metropolitan area, the aerial observer would conclude from the cyclic pattern of occupancy that many areas of the city have multiple uses. He would be able to discover these and other similarities which indicate a universal spatial pattern.

The Nature of Human Ecology

Ecology is the study of the functional relationship between organisms and their environments. It is based upon the concept of life as a world of dynamic interdependences. Every organism, plant and animal--including man--is constantly adjusting to an environment external to itself. The life of an organism is interrelated with the conditions of the environment, which comprises physical features such as topography, climate, and drainage and also includes other organisms and their activities.[1] All organismal activities are the ends or the means of adjustment to environment.

Ecology, like many other branches of science, is greatly indebted to Darwin and his concept of the evolutionary development of organisms. Darwin perceived all of life as a complex, interwoven entity at any one time. But the complexity, according to Darwin, is of a dynamic nature. Each organism is constantly engaged in a struggle for existence. Struggle for existence includes not only antagonism and conflict but also peaceful competition and cooperation. The omnipresent struggle for existence takes place in a dynamic environment. Darwin recognized an organic and an

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[1]Amos H. Hawley, Human Ecology: A Theory of Community Structure (New York: The Ronald Press Company, 1950), p. 3.

inorganic environment which may affect an organism. The environment is anything external to the organism which affects the behavior of the organism. In summary, Darwin has made a three-fold contribution to scientific development in the field of ecology: (1) there exists an interrelatedness of life in the dynamic process of adjusting to the environment, (2) a struggle for existence is the end and the means of the adjustment to environment, and (3) the environment is a highly integrated complexity of tangible and intangible items and forces.[1]

The Complex Web of Relations

Recently the U. S. Department of Fish and Wildlife pleaded with the American public to protect voluntarily certain species of wild duck. Severe weather, coupled with an unparalleled quantity of hunters last year, caused the crisis which threatened several species with extinction. Similar crises are constantly being encountered and have become so commonplace that one thinks little or nothing about them.

Several years ago in Jamaica, the author heard the history of the mongoose on that island. Sugar cane planters

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[1] Ibid., pp. 4-6.

were plagued by a certain species of rat. The carnivorous mongoose was imported to eliminate the species of rat. After it had eliminated that species of rat, it eliminated other species which had controlled some vegetation which was undesirable to man. The rat population extinct, the mongoose turned its attention to snakes. The mongoose multiplied rapidly and soon the snake population had been reduced drastically. By this time many insects and other small pests which had previously been controlled by the rodents and snakes were multiplying rapidly. The mongoose, which by this time was antagonistic to man on Jamaica, soon became his archenemy. The insect-eating lizards were being attacked along with certain species of birds and even domestic poultry.

Similar drama is constantly unfolding in infinite varieties. Any tree has roots, bark, and leaves upon which insects feed, and perhaps it has nuts or fruit upon which birds and squirrels feed. But the birds also feed on the insects and the fox feeds on the bird and the squirrel. The leaves decay and return to the soil much of what the tree extracted for its food. Vegetation may become covered and after many millenia turn into minerals which man decomposes to unharness energy.

Ecologists use the term "symbiosis" to describe one fact of the intricate interrelatedness of organisms. Symbiosis is the living together in intimate association or even in close union of two dissimilar organisms. In a broad sense the term includes parasitism, or antagonistic or antipathetic symbiosis, in which the association is disadvantageous to or destructive of one of the organisms. Ordinarily it is descriptive of cases in which the association is advantageous, or often necessary, to one or both, and not harmful to either. Webster's dictionary further indicates that the term is one which is used in the field of biology.

According to Park, symbiosis is an active force among human beings as well as among plants and lower animals. He establishes the notion that the symbiotic community is basic to a cultural society.

> The same biotic interdependence of individuals and species, which has been observed and studied in plant and animal communities, seems to exist likewise on the human level, except for the fact that in human society competition and the struggle for existence are limited by custom, convention, and law. . . . Human society is, or appears to be, organized on two levels, the biotic and the cultural.
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> We may distinguish between a society based on symbiosis, and one based on communication and concensus. . . . The two are but one society. The cultural superstructure rests on the basis of a symbiotic substructure, and the emergent energies that manifest themselves on the biotic level in movements and actions which are obvious enough reveal themselves on the higher, social level in more subtle and sublimated forms. . . .

> Economic competition as one meets it in human society, is the struggle for existence . . . modified and limited by custom and convention. In other respects, . . . it is not different from competition as it exists in plant and animal communities.
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> . . . . . .
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> A social organization on either the biotic or social level, so far as it involves the incorporation of individuals into a more intimate association, imposes limits, control, and direction upon these individual units. One may regard the plant and animal community as an association that is wholly anarchic and free. In that case, however, form of association on the cultural level will involve a limitation of the freedom of the individual.[1]

The human symbiotic community relies upon specialization and division of labor. Distinct qualities and distinct activities of the various members may have benefits, evidenced immediately or delayed, which are direct or indirect. Symbiosis is an ever-present factor in community life, but it is not the only factor of cohesion, nor is it the sole explanation of the interrelatedness of life.

The mutualism of unlike organisms only partially describes the web of life, which becomes interrelated by virtue of likeness as well as of diversity. To this relationship Hawley gives the name "commensalism." Commensalism, according

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[1]Robert Ezra Park, Human Communities: The City and Human Ecology, ed. Everett Hughes, Charles S. Johnson, Jitsuichi Masuoka, Robert Redfield, and Louis Wirth (Glencoe: The Free Press, 1952), pp. 227-29.

to Hawley, is expressed through the intricacies of competition.

> The most elementary and yet salient expression of commensalism in nature is competition, the name given to the kind of interaction in which each individual affects the behavior of every other, by its effect upon the common supply of sustenance materials. Wherever individuals with like demands crowd in upon limited resources there is competition. Competition is almost as general as are the phenomena of reproduction and aggregation. The processes, in fact, are the mainsprings of competition; they tend to bring about a situation in which the assembled organisms make demands for food and living space in excess of the available supply. The ensuing interaction may be exceedingly subtle, as in the competition of plants for light and nutrients, or frankly overt, as in the rivalry among chickens for food thrown into their pen. It may be indirect and unconscious, as the grazing of cattle in a fenced pastureland, or direct and conscious, as between business men seeking to outdo one another with their advertising.[1]

Competition is the fundamental force operating in the complex web of relations we call life. On the symbiotic level, competition is the main force in a struggle for existence. Society modifies the basic form, but it still remains competition. The very reproduction and aggregation of like organisms intensify the competitive environment. Park and his associates indicate that cooperative measures frequently are lacking in the aggregation process.

> Basic necessities of urban life are possible only through a tremendous development of communal

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[1]Hawley, op. cit., p. 39.

> existence. Three millions of people in Chicago are dependent upon one unified water system, one giant gas company, and one huge electric light plant. Yet, like most of the other aspects of our communal urban life, this economic co-operation is an example of co-operation without a shred of what the "spirit of co-operation" is commonly thought to signify. The great public utilities are a part of the mechanization of life in great cities and have little or no other meaning for social organization.[1]

Cooperation may be an accommodation in the process of competition and may be thought of as cooperative competition. The competition with other aspects of the environment, or even with other species, may force an accommodation between members of a particular species, but the competition may actually be intensifying in its larger aspects.

Man and Environment

Man, like other species, must constantly adjust to a dynamic milieu. The environment supplies him with the necessities of his biological makeup. It governs his behavior in both subtle and overt ways. At the same time, man's actions are constantly affecting the environment. His adjustment to environment is a dynamic interplay of the two processes--environment affecting man and man affecting environment.

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[1]Robert E. Park, Ernest W. Burgess, and Roderick D. McKenzie, The City (Chicago: University of Chicago Press, 1925), p. 53.

Through manipulation of the cultural superstructure, which rests on the basis of a symbiotic structure, man varies greatly in his adjustment to environment. The unique features of man's adjustment, Quinn says, lie in the social-cultural aspect of life:

> Adjustments between men and environment differ in three important ways from the environmental adjustments of lower animals: (1) Groups of men develop and use culture, and culture plays a major role in shaping the relations of man to his physical world. (2) Mobile men develop specialized functional areas within a wide-flung economy so that a given local areal pattern may reflect adjustments not only to immediate surroundings but to distant parts of the world. (3) Men live in a social world as well as in a web of symbiotic relations so that their areal patterns of adjustment depend on social as well as on ecological processes.[1]

Man reacts to his environment, not merely as a living organism, but as a cultured human being. He makes spatial adjustments because of the accumulated culture and his social relationships. Spatial changes resulting from symbiotic relations exist throughout the interrelatedness of life.

Basic Spatial Patterns

The spatial distribution of man is remarkably similar throughout the world. Rural ecological areas develop according to a few distinct patterns. Urban areas develop in

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[1]James A. Quinn, Human Ecology (New York: Prentice-Hall, Inc., 1950), p. 18.

patterns which are more complex than rural areas; however, rural and urban areas exhibit interesting similarities in their growth.

Rural Ecological Patterns

Of all the characteristics which contribute to the label "rural population," agriculture is the most fundamental. Smith states:

> Agriculture and the collecting enterprises are the basis of the rural economy; "farmer" and "countryman" are almost synonymous terms. "Rural non-farm," one of the United States Census categories, is almost a contradiction in terms; in addition to the residents of villages and hamlets it includes a hodgepodge of everything urban--from roadhouses, night clubs, and tourist camps to boarding schools, summer resorts, and canning factories--which is to be found outside the corporation limits of towns and cities.[1]

Much of the population which resides in rural areas and is not engaged in agriculture is engaged in occupations which are analogous. In some towns one may find farm machinery salesmen, wainwrights, feed salesmen, veterinarians, barn painters, and even lawyers who prefer to handle cases peculiar to those in agrarian occupations.

The farmer is constantly working with his physical environment. The spatial distribution of the rural

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[1]T. Lynn Smith, The Sociology of Rural Life (New York: Harper and Brothers, 1953), p. 18.

population is determined, as pointed up by Quinn, by both the environment and the interplay between man and the environment.

> Farming, the basic occupation of the agricultural community, obviously involves direct adjustment to the physical environment. The fertility of the soil, the topography, and the type of climate affect the size of farms, the kind of crops produced, and the yield. These factors, in turn, influence the density and mobility of the farm population and the number, types, and locations of specialized functional units, including towns and villages, that may arise.[1]

Farm size varies greatly in the United States. Small, financially inequitable holdings which are inadequate to support a single family are not common. Minifundia, a descriptive name proposed by Smith for inequitable holdings,[2] will vary in size in relation to fertility of the soil, rainfall, topography, market accessibility, length of the growing season, and other environmental conditions. Minifundia may consist of an acre or less in the Piedmont mountain range to 160 acres or more in the wheat fields of Kansas. In order to produce wheat on the competitive market, large expensive machinery is necessary and four or five sections of land may be needed to support one family. The truck farmer in the mountain range can succeed with considerably less land.

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[1] Quinn, op. cit., p. 64.

[2] Smith, op. cit., p. 300.

Much of his product will be consumed by the family and the remainder sold on a local market. Unfavorable weather could be disastrous to both of these marginal procedures.

Equitable holdings in rural United States may be family-sized farms or mass-production farms. The family-sized farm is one which is large enough to be worked by the family without the necessity of hiring a great deal of supplementary labor.[1] The exact size of the farm will depend on the crop and other environmental conditions. Mass-production farms require the labors of more than one family. With division of labor and specialization, the farm may be mechanized much like a factory. Huge farms are still found in the plantation South and have developed in the grain-producing plains of the West.

The size of the holdings has a great deal to do with the spatial distribution of farm people, stores, churches, and schools. Small holdings permit a closer proximity of farm homes than do large holdings; the ratio, however, is not direct. Large wheat farms require fewer personnel than do large corn farms or cotton plantations.

The density and distribution of the farm population is not attributable to any one factor. Absentee farming,

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[1] Ibid., p. 301.

religion as in the case of the Amish settlements, tradition, tax evasion, and recreation are but a few of the factors affecting distribution.

There are three principal types of rural land settlements throughout the world: villages, single farmsteads, and line villages.[1] In the United States the predominant type is the single farmstead; however, village and line village types do exist to a small degree.

The village type of rural community has the residences of the villagers as its nucleus. Surrounding the homes will be small plots for gardening and raising vegetables for the table. Barns will be located as near to the homes as possible. Fields for grain and pasture land lie beyond the barns. Such a pattern afforded the protection desired during the early settlement of the United States. Families were self-sustaining and little specialization or division of labor was utilized in the pioneer era. As the nation grew, specialization developed within the villages; blacksmiths, wainwrights, shoemakers, barbers, bakers, and dry goods shops began to flourish within the residential area. The nucleus area developed into a commercial as well as a residential area.

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[1] Ibid., pp. 201-15.

Although inimical to social growth and development, the single farmstead flourished in the United States. If the farms are small and the density is high, persons on single farmsteads are closer to each other than they would be if the holdings were large. In the early settlement of land in the United States, large holdings were given free or at a nominal cost. Land was abundant; in much of the West the land was divided by the government into sections of 640 acres. Land was distributed by the quarter-section of 160 acres. The philosophy of free enterprise and faith in the ability of the common man to ameliorate his station served to entrench the single farmstead as the American way of life in rural areas.

The line village may be considered a special case of the single farmstead. The holdings are restricted to a long narrow shape. The homes may be positioned along a road in close proximity to each other.

The single farmsteads, which predominate in the United States, do develop patterns about towns. Quinn describes the development of town-centered communities which furnish the individual farm residents with desired services and indicates the spatial specialization which is occurring in rural America.

> Given the traditional open-country type of farm settlement that has characterized most regions of the United States, it was natural for the town-centered community to arise as agriculture changed in type from subsistence tillage to commercial farming, and as efficient road and transportation systems developed. When the farmers of a locality produce large quantities of any one crop, and when they purchase clothing, furniture, machinery, and food, they need access to markets and stores. Under such conditions, the farmers themselves may remain scattered over the land, but a nucleus of elevators, stockyards, and stores tends to develop. This cluster of services, in turn, tends to attract schools, churches, clubs, and nonfarm residences. Thus, the integrated, town-centered rural community makes its appearance, a community that includes both the clustered town center and the open-country farms that it serves.
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> Town-centered communities are characterized by a center of dominance and a gradient pattern of functional integration. . . .[1]

Town-centered communities may not have the simple structure indicated by Quinn. Communities which have relatively large towns as centers also contain smaller towns or villages. General stores, schools, churches, or service stations may be found in small towns or local centers. According to Quinn, such small towns are located at the median of the smallest population that supports them.

> In general, convenience-goods stores and service stations, in which comparative shopping has little importance, tend to locate at the median of the smallest population that will support them, that is, at open crossroads or in small villages rather

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[1]Quinn, op. cit., p. 56.

> than in the larger, more-distant towns. Farmers, like city people, tend to travel the shortest ecological distance to secure a given service, other factors being equal.[1]

The ecological pattern of the rural portion of the nation is a town-centered community. Adaptation of man to his environment has caused (1) professional and commercial services to aggregate in a town, (2) the services of the town to be used and to influence the rural community in a gradient pattern, and (3) the center of the town to be located as near as possible to the median of the population affected by it.

Urban Ecological Patterns

The manner in which cities develop has been given a great deal of attention by ecologists. Under the leadership of Robert E. Park, there were many significant theories proposed and studies completed at the University of Chicago. In a world that was changing rapidly, the Chicago group faced the task of explaining the development in simple and concrete terms. Leaders in human ecology relied heavily upon plant and animal ecology to explain the bare observations which comprised the foundation of their scientific

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[1] Ibid., pp. 60-61.

approach. The careful studies revealed many forces and concretions which became factors contributing to the formulation of hypotheses of human spatial relations. A four-part classification of ecological factors has been made by Burgess:

> Ecological factors may be classified under four general heads: (1) geographical, which includes climatic, topographic, and resource conditions; (2) economic, which comprises a wide range and variety of phenomena such as the nature and organization of local industries, occupational distribution, and standard of living of the population; (3) cultural and technical, which include, in addition to the prevailing condition of the arts, the moral attitudes and taboos that are effective in the distribution of population and services; (4) political and administrative measures, such as tariff, taxation, immigration laws, and rules governing public utilities.[1]

Theoretical patterns utilizing ecological factors formulate an idealistic type which may never exist in all aspects but which will form an approximate pattern with at least a high degree of applicability in all cases. The applicability, and thus the validity, of any theory which departs noticeably from reality becomes questionable. On the other hand, the stated limitations of any theory must be scrutinized in order to avoid improper application.

Three theories of urban ecology are widely utilized by sociologists to understand urban growth. The concentric

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[1]Roderick D. McKenzie, "The Scope of Human Ecology," The Urban Community, ed. Ernest W. Burgess (Chicago: The University of Chicago Press, 1925), pp. 171-72.

zone theory was developed by E. W. Burgess many years ago. Another theory grew out of the scholarly criticism of the concentric zones by Homer Hoyt. He proposed the sector theory. Similarly, the multiple nuclei theory has evolved through a dissatisfaction with the other two theories. Each of the proposed patterns of growth is a theoretical construct and may be applied to any American city as a guide to understanding its growth.

The Concentric Zone Theory.--In 1923, Burgess read a paper before the annual meeting of the American Sociological Society in which he proposed that the growth of urban communities occurred according to a pattern of five concentric circular zones.[1]

Zone I is the central business district.[2] In the center of each urban development is a business area in which the main economic, social, civic, and political aspects of life function. Located in Zone I are large retail department stores, central banks, hotels, clubs, motion picture

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[1]Ernest W. Burgess, "The Growth of the City: An Introduction to a Research Project," Publications of the American Sociological Society, XVIII (1924), pp. 85-97.

[2]This discussion of the five zones is based upon Ernest W. Burgess, "Urban Areas," Chicago: An Experiment in Social Science Research, ed. T. V. Smith and L. D. White (Chicago: The University of Chicago Press, 1929), pp. 114-23.

houses, and office buildings. In the periphery of Zone I, wholesale business activity is concentrated.

Zone II is the transition zone. Around the central business district is a band which has a factory district in the inner portion and a ring of retrogressing neighborhoods in the outer portion. Immigrant colonies, rooming houses, Hobohemia, and places for vice and crime are found in the transition zone. The zone is characterized by physical deterioration and social disorganization.

Zone III is the independent workingmen's zone. It is occupied primarily by residents who wish to remain near but not too close to their work. The area contains many two-flat homes with the owners living on the first floor and tenants living above. The residents of this area are typically factory workers.

Zone IV is the zone of better residences. In this large band are the homes of businessmen, professional people, clerks, and salesmen. In addition to single homes, the area contains large apartment buildings and satellite business centers.

Zone V is the commuters' zone. The area includes small cities, towns and hamlets, and open-country homes. In the main, it serves as a dormitory area for businessmen who commute to their places of business each day. The

communities in the commuters' zone are highly segregated by socio-economic status. The range in status is great.

Empirical data supporting Burgess' thesis was obtained principally from Chicago. Home ownership, family dominance, delinquency rates, vice, percentages of foreign-born, sex ratios, and other social phenomena were found by Burgess to take the form of a series of gradients from Chicago's Loop to its periphery.

The Sector Theory.--From a study of real-property inventories from 142 American cities, Homer Hoyt formulated the sector theory of urban growth.[1] He discovered that most cities have at least one high-rent area that extends from near the center of the city to the area beyond the city limits. This area has a wedge-shaped appearance, becoming progressively wider as it approaches the periphery. There are also high-rent areas in the suburban areas which have moved out along a sectorial path, of which the inner segments have deteriorated and become inhabited by people of lower economic status. Commerce and industry also develop in a sectorial or linear path. They develop along river

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[1]Homer Hoyt, The Structure and Growth of Residential Neighborhoods in American Cities, Federal Housing Administration (Washington: U. S. Government Printing Office, 1939), pp. 112-22.

beds, railroad lines, and highway arteries. Hoyt refers to the typical American city as appearing like an octopus whose tentacles extend out along the numerous transportation lines.

According to Hoyt, the lateral or centrifugal growth may take three different forms. The first form he calls "axial" growth. This is the growth of residential areas along radial transportation lines stemming from the central business district. The axial growth contributes greatly to the octopus appearance of the city. Secondly, lateral growth is evidenced through the growth of isolated settlements beyond the boundaries of the cities. The settlements may contain commercial and industrial plants. Sometimes the growth of satellites is stimulated by industry; in other cases, industry may follow residential trends in the formation of smaller nuclei. Thirdly, the metropolis may expand through the coalescence of two or more of the smaller nuclei or through the joining of an isolated nucleus with one of the spurs of the main city.

The Multiple Nuclei Theory.--It has been evident in the discussion of both the concentric zone theory and the sector theory that American cities have more than one nucleus. Both concepts recognize the existence of other nuclei which are subjugated to the central business district. The multiple nuclei theory declares that cities develop

numerous centers, each with its own specialized influence. The nuclei may have industrial, commercial, governmental, racial, religious, or some other emphasis.

All three concepts of urban growth are utilized by sociologists to understand man's adaptation to his environment. Mercer emphasizes the compatibility of the theories with these words:

> Most American cities exhibit in fragmentary form all three kinds of organization at the same time. The specific location of high-rent residences, slums, warehouses, light manufacturing, and business zones depends to some extent upon the particular kinds of communication barriers, natural or social, which are present as the city grows, and upon terrain features such as the location of hills and water bodies. These factors, plus those growing out of human choice and pure happenstance, have served to create individuality in the spatial organization of cities. However, one may find a central business zone by proceeding to the center of nearly any American city, and surrounding it is likely to be a district of warehouses, light manufacturing, and once fashionable residences turned rooming houses. But one may also follow sectors of highly developed, expensive property from the center of the city outward along railroads or highways toward open country; and one may discover numerous nuclei clearly distinguishable from one another. The three theories . . . complement rather than contradict one another, and each has been found useful in research.[1]

The spatial pattern of most American cities seems to be generally in a circular zone pattern, with sectors of various

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[1]Blaine E. Mercer, The American Community (New York: Random House, 1956), pp. 32-34.

types of land occupancy cutting across the zones and with numerous nuclei of segregated centers.

Ecological Processes

The human ecologists utilize the developmental approach concept which plant ecologists use to describe structures as stages of process. Many of the processes are borrowed directly from the plant ecologist. Because of the emphasis on adjustment to the environment, process is of greater importance than structure. The processes which are used by human ecologists were presented originally by McKenzie to the American Sociological Society in 1925. The five processes presented by McKenzie are still the basis for contemporary ecological research.[1]

Concentration.--Concentration is the increasing density of the population in a given area or region. Formerly concentration was controlled by conditions of local food supply, but commerce and industry have served as controlling factors in recent years. Under the influence of the industrial economy, rural-farm areas of the nation have not gained population. The concentration has been in the

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[1]This discussion is based upon R. D. McKenzie, "The Scope of Human Ecology," The Urban Community, ed. Ernest W. Burgess (Chicago: The University of Chicago Press, 1926), pp. 172-82.

great urban industrial centers. The limits of concentration in any center or region are determined by the relative strength of the center in the competitive production and distribution of goods and services.

Concentration in one area usually causes dispersion in another. Factors which restrict the economic movement of goods limit concentration; conversely, factors which encourage mobility of the population encourage dispersion.

Centralization.--Centralization is caused by the propensity of human beings to come together at definite places for the satisfaction of common interest. People gather together to work, play, learn, or worship. Centralization is an alternate operation of centripetal and centrifugal forces regulated by the communal nature of man. Focal points of centralization are many. Shopping centers, schools, theatres, recreation centers, churches, and other social organizations draw people together under varying cultural and economic conditions.

The element of choice affects the degree of centralization. Commodities which are highly standardized in kind and price, such as patent medicines, groceries, and gasoline, are sold at widely distributed stores. More specialized services and items are more highly centralized.

Segregation.--Segregation is caused by a combination of forces of selection. Usually one factor of selectivity is more dominant than others. Each particular segregation is characterized by the dominant force of selection. Economic segregation is the primary type. Other forces of selection such as language, race, and culture, are subordinate to economic factors and function within the economic levels.

Invasion.--The encroachment of one segregated group upon another is known as invasion; it is a process of group displacement. Usually invasion occurs in contiguous groups. Lower socio-economic class groups usually invade upper class groups, but the reverse is not uncommon.

Succession.--Succession is the complete change in the type of population or a complete change in the use of a given area. Regions pass in a cyclic fashion through various stages of occupancy and use. Deterioration of buildings and other physical deterioration cause a change in the type of residence or encourage replacement by industry. Apartment house areas may change to a hotel form of residence. The population type changes with a change in the economic base. As an example, a farming community may change into a manufacturing community.

The Ecology of Business and Industry

The dominant nucleus of an American city typically has a concentration of economic, political, and social activities and is known as the central business district. Larger metropolitan areas possess many subordinate nuclei which have functions similar, but not identical, to those of the central business district. The spatial distribution of business, the commercial aspect of industry, and industry itself are in no small way responsible for the typical pattern of American urban community.

Spatial Distributions of Business

Commercial services may be categorized by the kinds of goods or services dispensed and by the number and distribution of customers.[1] Business firms that sell commodities generally are called stores, and those dealing in services are called shops or offices. A strict distinction between stores and shops is not possible because many outlets serve the public in a combined form. A beauty shop may sell cosmetics for home use or a clothing store may supply alteration services.

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[1]This discussion is based on James A. Quinn, Urban Sociology (New York: American Book Company, 1955), pp. 68-71.

Retail stores may be designated as dealing in convenience goods, shopping goods, or luxury goods.[1] The distinction is based on the size and cost of articles sold, degree of standardization of merchandise, and the frequency of purchase. Although there are many possible combinations, most stores can be classified into one of the three categories.

Convenience goods are well standardized in price and quality; the purchaser has little incentive to shop around. The stable groceries, cigarettes, magazines, and standard cosmetics are examples of convenience goods. The relative price of convenience goods is low. The merchant depends on volume sales rather than on a high percentage mark-up. Generally these items are relatively small in size. Stores selling convenience goods are found in and near residential areas; the customer need not compare prices and quality, so the maximum travel area which he will tolerate is low.

Shopping goods vary extensively in style, price, and quality. They are goods for which the customer will shop around before purchasing. Small and large appliances, clothing, furniture, or even the proper type or style of

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[1] Ibid., pp. 68-72. Also see Noel P. Gist and L. A. Halbert, Urban Society (New York: Thomas Y. Crowell Company, 1956), pp. 90-98.

drapery hook are examples of items for which considerable shopping may be required. Either price or style may make extensive shopping necessary before the purchase is made. Stores which deal in shopping goods must carry a variety from which to choose. Because of storage, floor space, and handling involved in shopping goods, the mark-up is typically higher than it is on convenience goods. The shopping goods store must locate in a place convenient to comparative purchasing. Suburban shopping centers provide much opportunity for comparative buying but cannot compare favorably with the large cluster of department stores and varied specialty stores which can draw thousands of people to the central business district.

Luxury goods have the greatest degree of diversity in style, price, and quality. Original hats and gowns, oriental rugs, and expensive art objects are typical of the items in this category. The merchant dealing in luxury goods must depend on a large mark-up since he caters to a smaller population and volume of sales is low. Luxury goods stores tend to locate in or near the central business district. Although they cater primarily to wealthy patrons, the huge quantity of middle-class patrons who occasionally patronize them have enough drawing power to keep luxury goods stores from locating adjacent to upper-class residential areas.

Service shops vary greatly in size, function, degree of specialization, and location. Service shops may serve people, as in the case of a barber shop, or they may serve property, as in the case of a plumbing shop. The degree of specialization possible is exemplified by the physician who is a general practitioner and the one who specializes in surgery of the heart. Highly specialized services tend to cluster in the central business district. Face-to-face contacts are advantageous to some services and become more plausible in the central district. Also, specialized services complement each other. Clustering of complementary services is particularly advantageous to highly professionalized services which are prohibited from extensive advertising by professional ethics.

Retail stores and service shops may cluster in either the central business district or subordinate nuclei, or may exist as isolated establishments.[1]

The central business district may be considered the heart or the headquarters of business activity. In this area economic decisions and policies are formulated. Much of the manufacturing industry is controlled from this

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[1]Quinn, Urban Sociology, pp. 68-80, and Gist and Halbert, op. cit., pp. 90-106.

district. Financial transactions for the region are made here; brokerage houses, investment banks, stock exchanges, and offices of specialized persons dealing in finance find the central location advantageous. Transportation routes are focused about the central business district. Railroad stations, bus terminals, taxi service, and local transit facilities are concentrated in or near this area. Retail stores for shopping goods and luxury goods cluster in this ecological center. Such goods draw large groups from the hinterlands for personalized selection. Highly specialized services of all kinds are located in the central area. Commercial recreational facilities, such as theatres, first-run movie houses, or large night clubs, also will draw patrons from a large community and therefore tend to have an ecological center in the central business district. As a city grows, the dynamic forces which created this district cause it to shift, constantly seeking the ecological center of the facilities which it provides.

Subordinate nuclei usually are formed by some shopping goods stores and a few luxury goods stores. Branch department stores, supermarkets, branch banks, specialized clothing stores, hardware stores, barber shops, and restaurants all may cluster in the large secondary shopping centers.

Traditionally, subordinate shopping areas arose at the intersection of major transportation lines. In recent years, large shopping plazas with acres of parking space have developed. Such areas attract patrons from a greater distance than can the subordinate nuclei which lack parking facilities. Some secondary centers string along principal arteries leading to the main shopping district. Such centers usually concentrate at areas where the more important crosstown routes cross the traffic arteries. In general, subordinate nuclei, according to their size, afford opportunity for comparative buying and may serve a large area. However, suburban shopping centers cannot furnish the extensive comparative purcahsing provided by several leading department stores in one concentrated area.

Isolated establishments dealing in convenience goods usually are located in the residential areas. Articles which are standardized in price or do not warrant the time or expense of comparison are sold by neighborhood stores. Convenience goods clusters develop on a larger population base than does the single store. Drug and hardware stores cannot be supported by as small a population as can grocery stores. Clusters of two to six stores crop up to satisfy the need for various convenience goods. All convenience goods stores operate on the shortest ecological distance; they locate at

the center of the small population which patronizes them.

Spatial Distribution of Industry

There is tremendous variability in the needs and demands of industry. Industrial production encompasses activities in which spatial requirements are varied or even flexible. Consequently, some industrial enterprises may seek locations near the central business district while others find it more advantageous to locate on the outer fringe of a metropolitan area.

Many factors affecting the location of industry vary greatly from one part of the city to another. Other factors do not differ significantly within a metropolitan area but vary from area to area. Many examples of both types of locational factors are indicated by Quinn.

> Labor ordinarily does not enter into the calculation of factory location within the single metropolis, because workers usually pay their own fares to and from work, and wages do not vary significantly from local neighborhood. Each of several other items required for industrial production also costs about the same in different parts of a city, usually with no single favored location. These items include raw materials, fuel, capital, water, and power. Except for differences in transportation rates, such items cost no more in one part of the city than in another.
>
> Certain factors necessary to industrial production do differ significantly in cost or availability from one part of a city to another. These differences influence the location of factories

> within the boundaries of the metropolis. One very important factor, which varies in cost from a few cents to hundreds of dollars per square foot, is land. Land is necessary always as a site for the factory building, possibly as a place for storing stocks of raw materials or finished products, and perhaps for the disposal of wastes. Differences in cost or availability of already constructed factory buildings in different parts of the city also may influence location. Differences in cost of transportation help to explain why certain types of factories ordinarily locate in one part of the metropolis, whereas others cluster elsewhere. Under certain conditions, the fact that labor may prove to be more readily available at certain locations within the city than at others influences the location of factories that depend on a shifting labor supply. Also a competing municipality within the larger metropolis may offer special inducements, such as tax exemptions, for factories to locate within its legal boundaries.[1]

Light Industry.--Industries which manufacture products of small size and weight fall into the category designated as light industry. The manufacture of jewelry, medicine, candy, cosmetics, cigars, clothing, and leather goods are examples. Food, newspaper, photo-engraving, small job printing, and light metals industries also are considered light industry. Industries utilize urban land extensively and tend to locate near the central business district. Some light industries have modest machinery requirements and use structures vacated by others. Some centrally located industries must work in close collaboration with similar

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[1]Quinn, Urban Sociology, pp. 80-81.

industries, such as those dealing in perishables or those which participate in style-setting or price-setting. Still other industries perform a service function to the central retail center and must be located nearby.[1] Thus, light industry has a tendency to cluster about the central business district; however, some light industry operates on such a large scale that it becomes expedient to locate on the periphery along with heavy industry.

Heavy Industry.--Industries which manufacture heavy and bulky products or those utilizing raw materials which are heavy or bulky are known as heavy industries. Steel mills, automobile plants, aircraft companies, sugar refineries, plants for publishing books and periodicals, petroleum refineries, cement plants, and lumber and paper mills are examples. Until the twentieth century heavy industry tended to locate near the center of cities, where transportation facilities and labor supplies were plentiful. In this century heavy industry has developed along railroads, rivers, and waterfronts, usually near or beyond the city limits.[2] According to Quinn, heavy industries exhibit some combination of the following characteristics:

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[1]Gist and Halbert, op. cit., p. 106.

[2]Ibid., p. 108.

> They require large tracts of land, usually several acres, and a considerable square footage per worker; they cannot use the loft-like structures near the heart of the city that have been abandoned by retail business, but need specialized buildings constructed to meet their own requirements. They utilize large amounts of bulky raw materials, fuel, or water, or they produce bulky finished products, so that they require effective contact with efficient heavy-transportation systems. Their products are not highly perishable, so that the time-distance to market is not important. They have no need for direct contact with retail customers. Their relatively stable labor force does not fluctuate violently from season to season. Some of these factories also have nuisance features--noise, dirt, odor, danger--or they face serious problems of waste disposal.[1]

All of the characterists listed are factors requiring heavy industry to locate on the periphery of the city.

Frequently heavy industry will form industrial clusters in order to facilitate more efficient use of transportation facilities. Some have a tendency to string along heavy railroad lines or along waterfronts in order to lessen the transportation costs of either product or raw material or both.

Multiple Location Industry.--Some large industries find it expedient to utilize multiple locations. A single corporation may maintain business offices in the central business section, a large factory on the periphery of the

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[1]Quinn, Urban Sociology, pp. 81-82.

metropolis, a light manufacturing or research plant near or adjacent to the central business district, and storage and shipping facilities at a warehouse-transportation center. As industrial enterprises develop to the extent that the diverse activities can be separated spatially, it is usually economically prudent to locate the separated activities in the ecological areas with which they are compatible.

Distorting Factors of Location.--Little has been said about factors which may hinder or distort the over-all pattern of industrial growth. There are in the environment which confronts the industrialist many physical and human factors which cause each industrial area to develop its own distinctive adaptations. Hills, valleys, rivers, lakes, rock beds, sand veins, swamps, and other physical features restrict or prohibit the building of plants and facilities. Sewage and waste disposal become economically prohibitive in certain terrains. The human factor of inertia causes many large factories to occupy atypical locations. As the city grows, plants which were on the periphery remain within the city limits through inertia; it is no longer economically prudent to remain, but the unpleasantness of moving causes them to stay. Human restoration of a swamp may cause a factory to locate in a place which does not conform with the existing pattern. Perhaps the building of a bridge or

a harbor tunnel will make land accessible which previously had been impractical. Legal barriers in the form of zoning laws and building restrictions are used extensively to control the location of commercial and industrial enterprises. Tax laws are used not only to restrict industrial expansion in some areas but also to encourage industrial growth in other areas. Municipalities may give free land as well as tax exemptions to encourage industrial growth.[1] Public ownership of land also may be used to discourage industrial expansion.

Industrial Deconcentration.--Industrial deconcentration may occur through either diffusion or dispersion. Diffusion is the relocation of factories from positions near the center to positions farther away. Dispersion is a wider redistribution of work plants from sites in a given community to other locations, either in the same general area or in another.[2] Both types of deconcentration have been prevalent in the United States in the last several decades. Heavy industry relocates to the expanded periphery of the growing

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[1]Atlantic Coast Lines have moved their offices to Jacksonville, Florida, because of an attractive offer of this type. See The Evening Star, Washington, D. C., December 22, 1959.

[2]Gist and Halbert, op. cit., p. 108.

metropolis, causing extensive diffusion. The utilization of idle land and of land freed by over-production in agriculture and the industrialization of the southern states have encouraged dispersion of industry in the United States.

In a study published in 1955, Hawley indicated the steady trend of industrial deconcentration since the turn of the century. He found that deconcentration progressed most rapidly in areas with high manufacturing employment and most slowly in areas where such employment was low. The study of the gradient patterns from the central city in metropolitan areas showed that manufacturing employees were more widely diffused in high manufacturing areas and more concentrated in low.[1]

It is apparent that size of product, raw material, physical plant, or volume of business are causing more industries to seek the periphery of metropolitan areas. Concentration is still apparent in light industry, but the massive nature of American industry causes the total picture to be one of deconcentration.

Ecology and the Industrial Arts Program

From the foregoing ecological analyses of population, commerce, and industry in the United States, nine significant

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[1]Amos H. Hawley, The Changing Shape of Metropolitan America: Deconcentration Since 1920 (Glencoe: The Free Press, 1955), pp. 117-23.

facts have been selected. The selected facts are grouped below to facilitate discussion.

1. Culture is the main differentiating feature between man's adjustment to environment and the lower animals' adjustment to environment.

2. Competition is the fundamental force operating in the complex web of life.[1]

All life must adjust to its environment. The adjustment made by human beings differs from the adjustment of other living organisms primarily because of culture. All organisms are part of the complex web of life. Man with his rational powers can accumulate material things, tools, and ideas. He adds to the environment through his competitive adjustment to it. The very accumulation of culture makes education a necessity. Without education, each generation would have to devise its own methods of adjusting to the environment. The public schools have evolved as a way of transmitting the culture to future generations.[2] The industrial arts program must help students to understand industry

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[1]Although competition is a basic force in establishing ecological patterns, cooperation is also of great importance. Both processes are basic processes in social living. Cf. infra, Chapter IX.

[2]Cf. infra, Chapter XIII.

as a cultural development in the interrelatedness of life. It must help students to understand specialization and division of labor as tools in the development of an ever-expanding culture. Industry, in its modern concept, has evolved from the efforts of men to compete with each other and with other aspects of the environment. Life, with its constantly changing environment, requires man to compete constantly or to suffer retrogression. Students in industrial arts should be helped to understand the over-all competitive nature of industry as a force to advance the culture and status of all mankind.

3. The town-centered community is the typical spatial pattern in the rural areas of the nation.

4. Urban spatial patterns of growth are in general circular zones with sectors of specialized land usage and with separate centers of segregated areas.

Industrialism is frequently, but erroneously, conceived of as an exclusively urban phenomenon. Farm machinery, trucks, tractors, electric power, and fuel are but a few of the direct and obvious factors of farm life which are a part of the industrial system. As industrial methods caused highly productive farms, the dependence of rural areas on larger markets became a necessity. Through specialization, division of labor, and improved technology, farm areas were

able to free land and personnel for production of material goods. In the process the farmer became dependent upon others for more and more of his goods and necessities at an elevated level of living. The industrial arts program must help students to understand the interrelatedness of rural and urban living. It must foster an understanding of the town-centered rural community as a method of meeting the demands of an industrialized nation. Similarly, the schools must help students to understand the urban ecological pattern as a workable solution to the complex interrelations of an industry-dominated way of life. In the center of every urban metropolis is a commercial and political district upon which the rest of the area is dependent. Spatial patterns are altered by many physical and cultural items, but the general patterns are similar throughout the country because the general forces of economy and other aspects of the environment have been similar. Human beings adjust to the environment in relation to their abilities and to socio-economic status. Persons of lower status have a tendency to live near their work and in close proximity to each other. They cannot afford to travel far to work, to keep up large properties, or to build large homes. The industrial arts program must help students to understand the spatial distribution of workers in the total interrelatedness of economic and social status.

5. The type of product (convenience, shopping, or luxury) determines the distance people will travel for it. Therefore, the type of product determines the location of the store which sells it.

6. The central business district, shopping center, or local store in any community will tend to locate at the geographic center of the population it serves.

The products of industrial production in both rural and urban areas are marketed through commercial outlets which are ecologically located. Competition serves as the basic force in locating the businesses. Each enterprise is supported by a definite population and must be located at a place which is accessible to all of that population. The schools must foster an understanding of the competitive and economic aspect of business locations and of the function of the type of product in the location.

7. Light industry clusters about the central business district. Heavy industry tends to locate in the peripheral areas of metropolitan districts.

8. In a metropolitan area, large corporations frequently have multiple plants, each of which is located according to its function.

9. Heavy industry and large light industry plants are becoming more deconcentrated in the large metropolitan areas of the nation.

The products and materials of light industry differ considerably from those of heavy industry. Light industry can function more efficiently near its market and the warehouse facilities of the central business district. It does not need buildings which are especially designed for its machinery and industrial processes. It does not have the waste products typical of so many heavy industries. Heavy industry may need acres of land for storage of raw materials or products. It may need access to water or other means of transportation. The schools should help students to understand the tools, products, processes, and materials of industry.[1] The industrial arts program must help the students to understand that physical elements differ in light and heavy industry and that these elements influence the location of the work plants. The youth must have the opportunity to analyze the spatial distribution of a work plant to understand the culture and processes underlying its pattern. The materials, products, and quantity of production have been influential in the deconcentration of industry. Other factors such as cheap land and access to water also have

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[1]It is with the study of products, tools, processes, and materials that industrial arts programs generally have been concerned. In all too many cases, the programs have dealt with them individually without helping the student to obtain an understanding of the industry in which they are used.

influenced the deconcentration trend. Students in the industrial arts program must be helped to understand the factors of deconcentration of industry. They should also understand the concentration of population caused by industry.[1] Although industries are diffusing and dispersing, they are concentrated in the metropolitan areas of the nation. Thus, the population is concentrated in these areas.

Because culture is unique to man, education must prevent the necessity for each generation to accumulate a new culture; schools must transmit important aspects of the accumulated culture to successive generations. Because rural areas have developed a typical pattern of land occupancy, because urban areas utilize the land similarly, and because commercial and industrial areas develop regular spatial patterns, students must be helped to understand the interrelatedness of life and the functions of specialization, division of labor, and industry in the web of life. Because there is a distinction between light and heavy industry, because they locate in different areas, and because their products, materials, and processes are the most influential factors in their

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[1]Cf. supra, p. 68.

location, industrial arts education must foster an understanding of the products, materials, and processes of industry.

CHAPTER VII

GROUPNESS

The group is the fundamental unit of all social action. Formal and informal groupings represent the way in which people organize to satisfy their needs and interests. Each group will have a quality of unity and a quality of organization. Each group will have its own hierarchy of authority.[1] The quality of interaction among members of each group and among groups varies greatly. The study of groupness is basic to an understanding of human life.

The Nature of the Group

A group is an aggregation of persons which forms a unit. The formation of a unit implies a cohesiveness created by the assemblage and the actions of the individual members of the group. According to Smith, each social group has three distinct elements: (1) two or more persons; (2) social interaction; and (3) unity or social solidarity among

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[1]Cf. infra, Chapter VIII.

the individual members of the group. Smith illustrates the necessity of all three elements in the following paragraph:

> Even plurality of persons and social interaction among them, however, are not sufficient to produce the social group. On Crusoe's island the discovery of the footprint was the first stimulus which the one man received as a result of the presence of the other, and it will be recalled that this affected the white man's behavior in a radical manner. But that alone did not make a social group of the two inhabitants of the atoll. Some of the most extreme forms of social interaction, mutual influencing of behavior on the part of two or more persons, occur during mortal combat. Two soldiers locked in hand-to-hand struggle can under no circumstances be thought of as a social group, although two persons are involved and social interaction is intense. Social solidarity is the missing element. For the social group to exist, the two or more must be united together by some form of "we feeling"--that they belong together, have something in common, and are more dependent upon one another than is true generally among mankind.[1]

The social group stems from the differentiation of human life. It is the basic social unit into which society can be subdivided. However, the concept can be all-encompassing. An individual can be a member of a small informal group, a formal group, a social class, a social caste, a society, a nation, and a universe. Each group to which he belongs may vary in size, in amount and quality of interaction, and in degree of cohesion.

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[1] T. Lynn Smith and C. A. McMahan, The Sociology of Urban Life (New York: The Dryden Press, 1951), p. 391.

Social Solidarity

The cohesion of groups of all sizes evolves from both the likenesses and the differences of men. Kinship, professional or occupational duties, common language, religious beliefs, age, and sex are examples of factors which may serve to bind individuals together through similarities. Differences of individuals in our complex economic system, educational system, religious organizations, or even in a particular species of life cause an interdependence which determines whether a group is loosely or tightly woven together.

There are two types of social solidarity which exist to some degree in every social grouping. One type will be of greater importance in each specific group. Of the two types, one is based upon similarities and is known as "mechanical" solidarity; the other is founded upon differences and the lack of self-sufficiency among the members of the group. This second type has been named "organic" solidarity.[1]

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[1]These names were first used by Emile Durkheim, the famous French sociologist. Cf. T. Lynn Smith and Vernon Parenton, "Social Cohesion and Social Control" in T. Lynn Smith and C. A. McMahan, The Sociology of Urban Life (New York: The Dryden Press, 1951), pp. 403-11.

Mechanical solidarity is usually strong in groups that are small, isolated, static, and immobile. It is weak in large, mobile, and rapidly changing groups. These groups are characterized by spontaneity. They may be of the same race, live in the same neighborhood, be members of the same family, have similar religious beliefs, or possess a commonalty of other values, environment, and patterns of thought.

Organic solidarity is based upon social and biosocial differences that complement one another. Man and woman are mutually interdependent because of the difference in sex. Similarly, specialization and division of labor create mutual interdependence in an industrial group. The industrial economy has been founded upon an ever-increasing mutual dependency among the members of society.

Functions of Groups

The functions of groups in an industrial society are numerous. In the general sense, there are formal groups and informal groups. Formal groups establish rules which govern the conduct of the members; the functions of the members are more or less well defined; the collective goals and behavior of the group are defined through formal agreements such as by-laws; and a hierarchy of authority is established. Informal groups may operate within a framework

which has rigid rules. However, they usually are not of a written documentary type. Most frequently informal groups depend upon direct interaction, and rules can be spontaneously inaugurated or changed.

Formal and informal groups differ more in procedure and size than in function. Although the structural framework varies, many functions are similar. Gist and Halbert list a few of the numerous functions which are of a social nature.

> (1) They serve as instruments of social control by imposing certain standards of conduct on individual members. (2) They function as social units for the formation of public opinion through interplay of ideas. (3) They tend to reduce purely personal competition by substituting group action for what might be strictly individual action. (4) They provide protection against outsiders and afford individual members a sense of personal security based upon social acceptance within an intimate circle. (5) They offer opportunities of escape from emotional tensions accumulated in the competitive work-a-day world. (6) It is in such groups that one can "lower his guards" and "let down his hair"; for this reason they undoubtedly have considerable therapeutic value.[1]

Groups are also divisive as well as cohesive in their influence. Since they reflect social differentials in the larger society, they often tend to pit race against

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[1]Noel P. Gist and L. A. Halbert, Urban Society (New York: Thomas Y. Crowell Company, 1956), pp. 321-22.

race, older people against younger, male against female, labor against management.[1]

Group relationships provide opportunities for social participation which are extremely valuable to citizens in a democracy. Although many associations exhibit some anti-democratic features such as excluding persons because of racial or cultural differences, the organizations often provide practical experience in the processes of associating and working together.[2] In the group, the participant learns the social procedures of plural living. Procedures of social control and conformity and of cooperation and competition are taught through the school of the group. Uniformity of behavior, appearance, and ideas is promoted and developed through group pressure. The large number of groups of people in the United States--groups that overlap and intermingle--serves to perpetuate the democratic way of life.

Specialization and division of labor create groups which are highly diversified in function. Groups are established to expedite the various roles. Secretaries, clerks, engineers, mechanics, garbage collectors, golfers, or bowlers group together in order to perform their specific functions.

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[1] Ibid.

[2] Ibid.

Because of the thousands of specialized roles, most persons in an industrial society encounter a great diversity of contacts--a few being intimate friendships, but most being formal and impersonal.

The Human Group

The informal group has been studied extensively by Homans. In his book, The Human Group,[1] he has developed an objective framework in which to analyze the group and has evolved a general theory of the small group.

Homans expresses the belief that the relationships among the elements of behavior may remain the same the world over. On this hypothesis he establishes three elements of human behavior. (1) Sentiments refer to the internal state of the body. Sentiments include fear, hunger, likes, dislikes, joy, sadness, and all other internal states. (2) Activity is used in the general sense of the word. It can include smoking, playing, speaking, potato planting, haymaking, and an infinite number of other things which human beings do. (3) Interaction occurs when an act or feeling is the result of another's actions.

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[1]George C. Homans, The Human Group (New York: Harcourt, Brace and Company, 1950).

Sentiments, activity, and interaction operate as three elements in a complex universe made up of two systems. The external system encompasses "the behavior of a group so far as that behavior represents one possible answer to the question: How does the group survive in a particular environment?"[1] In other words, the external system is the group behavior through which the group adapts to its environment. The mutual dependence of the work a group does and the motives for the work, through the division of labor and the pattern of interaction, are relationships involving the survival of the group. The group, of course, reacts in its environment, and thus is part of its environment and changes it.

The internal system is the "elaboration of group behavior that simultaneously arises out of the external system and reacts upon it."[2] It includes forms of behavior not included in the external system. The internal system may be expressed as the behavior resulting from an expression of sentiments which the members of a group have developed toward one another.

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[1] Ibid., p. 109.

[2] Ibid.

Certain behavior becomes the expected pattern of events in the various groups. Norms of behavior develop as ideas in the minds of the members of a group. Under given circumstances, not only is a specified behavior expected, but some form of punishment is evoked upon those who choose to deviate from the pattern. Unless the group does impose some form of punishment for deviation from an expected form of behavior, the pattern is not a norm but an ideal. Non-conformity must be regulated and conformity rewarded in the system of norms in any group.

Through a synthesis of the findings of studies of small groups, Homans discovered what he considered to be universal patterns of group relationships. Sentiments, activity, interaction, and norms evolve within the external and internal systems in a manner which is much the same in all groups. Many of the relationships which Homans found to be universal in all the groups studied are listed below. The listing has no significance attached to its order.

> [1] Persons who interact frequently with one another tend to like one another.
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> [2] If the frequency of interaction between two or more persons increases, the degree of their liking for one another will increase, and vice versa.
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> . . . . . .
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> [3] If the interactions between the members of a group are frequent in the external system,

sentiments of liking will grow up between them, and these sentiments will lead in turn to further interactions, over and above the interactions of the external system.

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[4] A decrease in the frequency of interaction between the members of a group and outsiders, accompanied by an increase in the strength of their negative sentiments toward outsiders, will increase the frequency of interaction and the strength of positive sentiments among the members of the group, and vice versa.

. . . . . .

[5] The nature of the relationships between the individuals A, B, C, ... is always determined in part by the relationships between each one of them and other individuals M, N, O, etc.

. . . . . .

[6] The members of the group are often more nearly alike in the norms they hold than in their overt behavior. . . . They are more alike in what they say they ought to do than in what they do in fact.

. . . . . .

[7] The activities of a subgroup may become increasingly differentiated from those of other subgroups up to some limit imposed by the controls of the larger group to which all the subgroups belong.

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[8] The higher the rank of a person within a group, the more nearly his activities conform to the norms of the group.

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[9] A person of higher social rank than another originates interaction for the latter more often than the latter originates interaction for him.

. . . . . .

[10] The sentiments of the leaders of a group carry greater weight than those of the followers in establishing a social ranking.

. . . . . .

[11] The higher a man's social rank, the more frequently he interacts with persons outside his own group.[1]

The relationships found by Homans are illustrative of one type of analysis of human groupings. The relationships presented above lead to an understanding of the group as (1) an agent of social control, (2) a status-placing agent, (3) a system for recreation, (4) a protective body, (5) a system through which friendships are made, altered, or broken, (6) a competitive as well as a cooperative organization, and (7) an agent of social mobility. In short, the group is an indispensable part of life about which all social life functions.

Primary and Secondary Contacts

The quantity and quality of human interaction vary greatly. The contacts of a rural farmer are most likely to be his family, friends, or neighbors, whereas the contacts of an urbanite display a high degree of anonymity. Contacts in an agrarian society are primary; that is, they are personal and permanent. In the massive populations of industrial cities, however, contacts are more impersonal and temporary; they are of a secondary nature.

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[1] Ibid., passim.

Primary contacts[1] have a personal quality. One communicates with another as a person, not merely as someone with an office or a position. Friends have value because of mutual satisfactions rather than possible social or economic gains. A high degree of intimacy is evident in primary contacts. Intimacy embodies an openness which allows the participants to share personal memories, aspirations, pleasures, sadnesses, and problems. Primary contacts display a high degree of spontaneity and emotional feeling. In the intimate personal relationship, the participants can lower their guard without fear of criticism. The members of groups which display a high degree of personal and intimate relations tend to be informal. In primary relations, informality replaces the rigid rules of etiquette, patterns of formal dress, conventions of politeness, and many of the other formal conventions of society.

Secondary contacts are impersonal. One receives milk from the milkman, not from Harry, a personal friend. Anonymous representatives of an occupation, position or office efficiently conduct the business at hand without

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[1]Cf. Quinn, op. cit., pp. 167-73 and Charles H. Cooley, "Primary Groups" and Robert E. Park, "Secondary Contacts" in T. Lynn Smith and C. A. McMahan, The Sociology of Urban Life (New York: The Dryden Press, 1951), pp. 366-403.

becoming involved personally. Relations on the secondary level frequently involve economic or social exploitation of persons or positions. Less intimacy is displayed in aggregations which function in the realm of secondary contacts. Social conventions formally control communication and actions. Contractual arrangements replace informal agreements and persons enter each situation with less feeling. Relations in industrial metropolitan areas are not exclusively secondary, however. Although impersonal secondary relations characterize many aspects of life in industrial areas, primary groups form an essential part of the world of the urbanite. Informal organization in the form of cliques, gangs, or groups provides primary contacts for all persons in an industrial society.

Industrial Groupness

The extensive differentiation of American industrial society creates an intircate system of formal and informal groupings. According to Miller and Form, labor and management constitute the two major groups of the work plant society.

> The people who live and work inside the factory, store, or office become participants in many social groups. They become of necessity members of a social structure and take their place in a work plant society. This society commonly contains a

> House of Labor and a House of Management. In one sense, all workers live in both houses but their interests and loyalties tend to be concentrated in one direction or the other. Both houses are distinguished by separate and overlapping organizations.[1]

The individual worker has his most meaningful experiences as a member of a small group. He can experience the larger organization only by indirection. The small group, on the other hand, is more than a vehicle for experiencing life. The small group influences and creates attitudes of loyalty, prejudice, and bias toward the comprehensive industrial world. Since the individual is not a member of a single group within the larger organization, he develops a concept of industry and of his place, duties, rights, and obligations through participation in several small groups which have been established either formally or informally.

The Formal Organization

Organization of an enterprise is necessary for efficient operation. It is needed for the coordinated allocation of functions and authority. From the sociological point of view, social organization appears through the continuous

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[1]Delbert C. Miller and William H. Form, Industrial Sociology (New York: Harper and Brothers, 1951), p. 104.

interaction of persons in pursuit of common goals. Organization consists of the patterns of behavior which group members display toward one another. In other words, organization consists of the behavior expectations that the individuals have toward one another as group members.[1] As was pointed out by Homans,[2] the group members are more coordinated in the norms they hold than in their overt behavior. Actual behavior is altered by unusual circumstances, individual differences, and interaction with group members and with other groups.

Formal organization is the rational norm pattern for coordinated activities of the people affected. Change in behavior expectancy arises when the people continually make substantial deviations from the formal organization; however, some deviation may be expected in even the most stable organizations. For example, grievance procedures are usually incorporated into the formal organization to allow for change. Thus the formal organization is dynamic, not static.

The formal organization does not include the physical environment, the specific social situation, or the

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[1] Ibid., p. 144.

[2] Cf. supra, pp. 199-201.

specific members of the organization.[1] It may predetermine many features of the physical plant; for example, the number of offices and desks will be affected. The organization is primarily an organization of positions or offices. The individual members are incidental to the functions of the positions, to the relationships of the positions to each other, and to comprehensive organization. Specific social situations, such as a flirtatious secretary in an office staffed predominantly with men, will have their effect on the efficiency of the enterprise, but they are not part of the ideal organization.

The industrial organization charts portray the formal organization. Miller and Form indicate four features which are universally contained in organization charts.

> These relations are: (1) the authority relations, or what offices appear to have authority over other offices, (2) what offices or groups are responsible to what other offices, (3) what groups have what specific functions (auditing, cleaning, managing), and (4) who reports what to whom (the communication system).
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> These relations are found universally in formal organizations everywhere. They are present in labor, business, political, educational, religious, and other organizations. The specific relations themselves are universal, and therefore noncultural.[2]

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[1] C. I. Barnard, The Functions of the Executive (Cambridge: Harvard University Press, 1947), p. 64.

[2] Miller and Form, op. cit., pp. 145-46.

The organization, as a whole, functions in terms of smaller groups. Groups range in size from two to twenty people, but average about ten. The size must be small because communication and cooperative behavior are best achieved in small groups.[1] Large organization of both management and labor develops through a division of labor and function. The work of a group may develop to a point where it becomes feasible to split the functions and the group. The two groups in turn grow and develop functional diversity and split into two again. Such is the developmental pattern of bureaucracy.

Bureaucracy is the hierarchical arrangement of power and functions of the groups in an organization.[2] This is to say that the formal organization of management or unions embodies layers of unequals. People are grouped by different levels of authority, prestige, and opportunity. Recruitment, training, promotion, tenure, and retirement of personnel are specifically regulated according to the hierarchical arrangement.

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[1] Ibid., p. 152.

[2] For a more extensive treatment of this subject see Chapter VIII. The discussion in this chapter is based on Gist and Halbert, op. cit., pp. 366-70.

Communication in a bureaucratic organization is subject to the hierarchical arrangement. One must "go through channels" in order to communicate or to transact business with someone who is not immediately above or below him or with someone with whom he does not interact in his daily routine. Because of the extensive delays caused by going through channels, bureaucracy may seem inefficient. An extensive reporting and recording system develops to keep each successive echelon informed. This recording aspect of the communicative system results in much paper shuffling which may seem to be nonproductive; however, in the long run, bureaucracy has proved to be extremely productive and efficient.

An efficient arrangement of groups and functions provides a productive organization. Drucker emphasizes this point when he says, "The mass-production principle is not a mechanical principle. . . . It is a social principle--a principle of human organization."[1] Stenographers, drill press operators, draftsmen, or janitors are grouped so as to make a collective productive machine. Drucker concludes that the organization rather than the individual is productive

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[1]Peter F. Drucker, The New Society (New York: Harper and Brothers, 1950), p. 4.

in an industrial system.[1] The utilization of individuals in highly specialized capacities increases the productive power and thus the efficiency of the organization.

Miller and Form summarize the theory of formal organization in the following words:

> Throughout the organization there is a strict definition of authority and responsibility. Similarly, there is an equally precise definition of the functions of every department. Free and accurate communication flows from every part of the organization to every other part. Every action is guided by the principle of what is best for the organization as a whole.[2]

The theoretical statement is altered substantially in practice. In reality the physical plant, the social situations, and the individual members affect the functioning of the formal organization. In brief, the formal organization is affected by the informal organization.

The Informal Organization

Informal groups always have been an important aspect of the total organization. They have become the subject of extensive investigation since the famous Western Electric study discovered the informal organization to be extremely

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[1] Ibid., p. 6.

[2] Miller and Form, op. cit., p. 159.

influential in establishing behavioral patterns.[1] It has become evident that the individual experiences the total work situation only through its smaller organizations. The small group contributes directly to the attitudes and behavioral patterns of the individual and thus contributes immensely to the ethos of the entire world of work.

Informal groupings are multiple and overlapping. An individual belongs to many systems of interaction which have varying forms of solidarity. An important system is the person's task group, the group which is designated by the larger organization to perform a common function. The task group in operation may deviate considerably from the designated group in the company flow chart. Friendship groups develop through the interaction of those persons who experience mutual satisfaction from the association. Persons who share a common economic interest and desire common goals within the larger organization form interest groups. Interest groups seek mobility to higher levels of social and financial rank or prestige.[2]

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[1]Fritz J. Rothlisberger and William Dickson, Management and the Worker (Cambridge: Harvard University Press, 1950).

[2]Leonard R. Sayles, Behavior of Industrial Work Groups (New York: John Wiley and Sons, 1958), pp. 151-52.

Although the task group originates as part of the formal organization, it develops as a social unit. Gross attributes the social development to the spatial arrangement of the individuals.

> The major tie binding workers together in the work group and defining their relationships to each other is that of symbiosis, or interdependence. One man cuts a piece of metal to certain dimensions, a second cuts another piece of metal, a third takes these two pieces and drills corresponding holes in them, a fourth bolts the two pieces together. If any one of them does not do his job, the work of the whole group is brought to a halt, or else pieces pile up, and bolted assemblies are not produced. If the group is paid according to how many bolted assemblies they produce, then individual earnings will also drop. Each member of the group is therefore dependent on every other member of the group.[1]

If persons interact frequently, they tend to increase the degree of their liking for one another.[2] The mere placement of persons side by side will increase interaction among them and consequently aid in the development of friendly work groups. It is not plausible to think that mere proximity of bodies will develop groups. Although the formal organization can stimulate liking and solidarity, it cannot predetermine groupness. Two or three in a department may form a solid group and prohibit the inclusion of others. It is a

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[1]Edward Gross, Work and Society (New York: Thomas Y. Crowell Company, 1958), p. 506.

[2]Cf. supra, p. 199.

wise foreman who can utilize each of the naturally formed groups to the advantage of all. The norms and goals of the separate groups may vary greatly.

The norms of behavior for a group may not always be compatible with the formal rules of the enterprise. The individual is likely to find the punishment of the social group more distasteful than that of the formal organization. In that case, methods of cheating in rate-setting or quantity reporting, methods of illegal work sharing, methods of shifting the responsibility designated in the formal organization, and methods of rejecting the formal rules are developed to allow the individual to maintain his status in the group.[1] This does not imply, however, that informal groups become powerful, autonomous organizations. On the contrary, they are quite sensitive to their external environments. Changes which are introduced by management without consulting or working through the informal organization can seriously disrupt both the formal and informal organizations. On the other hand, loosely knit groups can develop into strong productive units within the social system of the entire plant.[2] In such cases the informal system envelopes beliefs,

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[1]Gross, op. cit., passim, pp. 514-19.

[2]Sayles, op. cit., pp. 158-59.

goals, and norms of behavior which are compatible with those of the formal organization.

Groupness and the Industrial Arts Program

The analysis of groupness in the population and in industry reveals many facts pertinent to education and the industrial arts program. Ten of the most salient items have been selected for discussion.

1. The group is the fundamental unit of all social action.

2. The more people interact, the stronger are the feelings of closeness and of liking.

3. In group activity, certain patterns or norms of behavior evolve. Each individual group member has his pattern of adherence to the norms.

Human life is social; society is composed of an infinite number of groups which intermingle and overlap. The family is probably the most basic social group.[1] In the family, members are intimately involved in common goals and interests. Members of any group become closer and share similar goals and thought patterns through interaction. The similar ideas and mutual interaction cause norms of behavior

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[1]Cf. infra, Chapter XII.

to evolve. With the help and guidance of the schools, youth can learn the significance of the interaction among members of a group and among groups. Through actively pursuing problems in various groups, young people experience the interaction of group behavior. Industry has a tendency to aggregate the population, making collective living imperative.[1] The industrial arts program must help students to participate rationally in group activities.

4. Group cohesion evolves from both likenesses and differences in the members.

5. A group whose solidarity is based upon homogeneity is characterized by primary or personal contacts.

6. A group whose solidarity is based upon specialization and division of labor is characterized by secondary or impersonal contacts.

7. Industrial cohesion is caused primarily by differences.

Pupils belong to many groups which vary extensively in size and in type. Students participate in families, neighborhoods, schools, homeroom classes, subject classes, performance groups, playground cliques, scouts, and many other special and general interest groups. Many of the

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[1]Cf. supra, p. 68.

groups are of a homogeneous nature while many function because the members differ and complement each other. Groups which are based on homogeneity develop unity through oneness of thought and deed; action is spontaneous. Such groups are internally formed. Schools must help students to grow through informal groups; they must recognize the need for the group to evolve its goals and behavioral patterns. Through interaction with the groups the teacher can foster student growth, but he cannot expect to impose goals to be sought simultaneously by all members of a group.

In a society which is highly developed, many groups are formed that function through the differences of their members. When a society develops a large cultural base, it becomes impossible to transmit the entire culture to succeeding generations. Hence, specialization becomes a necessity. By specialization and group living, man is able to maintain a culture; this is the distinguishing factor between him and the lower animals.[1] The schools must help students to understand the necessity for group living and its complementary nature. They must help the students to learn to expedite collective living through functional cooperation. Education and the industrial arts program must help the

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[1]Cf. supra, p. 184.

students to understand themselves and the fields of specialization which they might pursue. Such an understanding requires the industrial arts program to help the students to explore industry in a general sense and to make more concentrated studies in the industries in which their special interests lie.

8. Large formal organizations function only through small groups.

9. The large industrial organization depends upon the behavioral norms of the small informal groups within it to establish its ethos.

10. Industrial organizations formally and strictly define authority and responsibility.

The large organization depends upon its smaller groups and their specialization to develop a functioning whole. Top management, superintendents, supervisors, divisions, departments, staff personnel, and maintenance personnel are needed to make the organization productive. Along with the formal groups of the organization are voluntary groups such as unions and informal work groups and cliques. Groups which do not have the opportunity to understand their roles in the entire program of the organization establish norms and goals based on their limited experience. Such groups frequently develop norms which are opposed to the responsibility and

authority patterns of the formal organization. Groups which are helped to understand their roles in the total program are most likely to establish behavioral patterns compatible with the over-all program. The industrial arts program must help students to evaluate group goals and to understand them in terms of the total program. It must help students to understand how unions, management, staff, community, and civic organizations function in the total economic organization. Industrial groups compete and cooperate in the interrelatedness of life. The two processes are essential to the formation and location[1] of industrial groups. Students must be helped to understand the processes as forces in the total structure of industrial society.

Because the group is the most fundamental social unit, because groups develop norms of behavior, because formal organizations can function only through smaller groups, and because small groups establish the ethos of the larger organization, education must help students to experience and to understand group life. Because groups evolve from likeness and from differences, because modern society depends on differences for cohesion, because society depends on specialization to perpetuate its culture, and because industry

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[1]Cf. supra, Chapter VI.

functions through small groups, the industrial arts program must help students to understand the interrelatedness of industrial life. It must function as a part of the total guidance program of the school and help students to explore industrial organizations. Because groups develop norms of behavior, because of the interrelatedness of life, because large organizations function through small groups, because industry is based on specialization and division of labor, and becuase large industrial organizations have formally defined authority patterns, industrial arts programs must help students to evaluate group goals and behavioral patterns and to understand them in terms of the total program.

CHAPTER VIII

SOCIAL STRATIFICATION

Inequalities of men have been a focal point of scholarly pursuit and speculation for a long time. Plato, in his efforts to create an ideal state, judged men in terms of their inherent capacities. Because of his awareness of differentiated ability to perform various tasks, Plato envisaged an ideal state fostered by education. Each person's inherent capacities, developed through education, would place him in the societal category which could best utilize his abilities. Man, according to his capabilities, would labor, perform administrative or military duties, or rule.[1] Aristotle viewed the inequalities of man as a natural phenomenon which tended to group man into (1) the very rich, (2) the very poor, and (3) the mean class. For Aristotle, the two extreme classes were equally "evil" and it was best to "possess the gifts of fortune in moderation"

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[1]Reinhard Bendix and Seymour M. Lipset (eds.), Class, Status, and Power (Glencoe: The Free Press, 1953), p. 7.

and belong to the middle class.[1]

In contrast with the classical system of placing man in society according to inherent capacities and differences in virtue as well as apparent inequalities, modern sociologists have concentrated on the apparent inequalities to place man in social classes. The intangible differences in virtue and other speculative aspects of man's nature do exist but cannot be treated effectively until better methods of discovering and measuring them are developed.[2] Objective observation of the differentiated rights, privileges, prestige, power, and obligations of individuals have helped to develop an understanding of the hierarchical arrangement of society.

Social Classes

The concept of a social class is not an explicit one. Historically, the social class was a grouping of people with similar prestige, privilege, and power which was clearly distinguishable from other groups, each with social similarities. In colonial America, status categories were readily

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[1]Aristotle, "Social Classes," Class, Status, and Power, eds. Reinhard Bendix and Seymour M. Lipset (Glencoe: The Free Press, 1953), p. 17.

[2]Bendix and Lipset, op. cit., p. 7.

identified. Indentured servants, slaves, clergy, free men, and property owners were adequately separated by law, style of life, occupational differences, or skin pigmentation. In contemporary America, the lines of class separation are no longer as explicit and distinct. Radical variations in wealth, power, and privilege are evident, but the "differences seem to range along a continuum with imperceptible gradation from one person to another."[1] One cannot draw the line objectively between the rich and the poor, between the privileged and the underprivileged, or between workers and capitalists. The differences are not dichotomous, or trichotomous, or even categorical at all; they are continuous.

A social class is a hypothetical construct or tool used to foster an understanding of society. Cuber and Kenkel suggest that the term "social class" be modified by the adjective "statistical."[2] Any continuous series of data may be divided arbitrarily or systematically into class intervals in order to facilitate the analysis. Thus, in the continuum of age, intervals of three years, five years, or ten

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[1]John F. Cuber and William F. Kenkel, Social Stratification in the United States (New York: Appleton-Century-Crofts, Inc., 1954), p. 12.

[2]Ibid., p. 13.

years may be used. Likewise the periods of infancy, childhood, young adulthood, middle age, and old age may be used, arbitrarily establishing where each period stops and the next begins. Viewing social class in the context of a statistical tool will allow the student of social stratification to understand why different authors find two, three, five, or six classes in American societies.

Class and Caste

Whether social class is a reality or a professional tool used to study society is a matter on which the sociologists disagree. There is agreement, however, on the fact that society is hierarchically arranged according to economic and social status, power, privilege, and prestige. The social class is a reality in the minds of the layman, as illustrated by such well known phrases as "the uppity-ups," "the other side of the tracks," "the four hundred," "the working class," or "the average class."

Movement up or down the class hierarchy is known as vertical social mobility.[1] A class system may be considered open or closed by reference to the relative ease with which status may be changed. In a closed system, change in status

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[1]Cuber and Kenkel, op. cit., p. 17.

or class is extremely rare. There is little or no possibility of a serf becoming a landowner in a closed system. On the other hand, an open system is one in which vertical social mobility is relatively easy and frequent. It is a system in which persons who were born of low estate, but have the ability to function in higher positions, move upward to assume the higher roles. Likewise, an open system requires a downward mobility of persons incapable of functioning in high positions.

In the United States, the open system has been cherished as a democratic ideal. The "rags to riches" and the "log cabin to president" stories have been the foundation of the American Dream. This dream is a belief that democratic principles will allow the able to occupy positions of great power and those of lesser ability to perform on a level commensurate with their ability. If the American Dream is a reality, ease of vertical social mobility is a necessity.[1]

Mobility up and down the social hierarchy is not restricted to individuals; groups may be socially mobile. For example, since World War II great stress has been placed on scientific and technical education. Teachers and

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[1]W. Lloyd Warner and James C. Abegglen, Big Business Leaders in America (New York: Harper and Brothers, 1955), Chap. I.

professors have experienced a small increase in the level of living they are capable of supporting. The education group was socially mobile. Another illustration of the mobility of a group, but in a downward direction, is seen in the clergy. In colonial times most of the colonies were church-owned. Clergymen were community leaders, as well as church leaders. Today, although highly respected, the clergyman does not occupy the position of great power in community organization that he did in colonial America.

Barriers to vertical social mobility exist in all societies, since no society is entirely open or entirely closed. Functionally, barriers are formed by innate abilities and limitations. A person who does not have the physical and mental capacity to become an engineer is denied the right to enter the profession. Frequently, barriers to social mobility are arbitrarily imposed. Color, religion, age, and family status are frequently used to prevent capable persons from occupying positions of high power and esteem. Thus, the potential of many individuals is never realized and society is thereby deprived of their fullest contributions.[1]

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[1]Cuber and Kenkel, op. cit., p. 16.

A caste system is one which has extensive barriers causing a closed system with little or no vertical mobility. Economic and social status, power, privilege, and prestige are relatively permanent in a caste system. A class system has caste features when movement from one stratum of society to another is hindered by factors not directly related to the capacities and abilities of the individuals themselves and to the amount of energy they are willing and able to exert.[1] Barriers which are imposed arbitrarily contribute to a closed system, whereas barriers which are based functionally contribute to an open-class structure.

In the United States, the Negro and to a lesser extent other persons of color represent a caste group. The Negro is prohibited from some positions and severely limited in others, regardless of his ability. It is virtually impossible for a Negro to become President and seldom does he reach managerial levels of a business enterprise. Educational and employment possibilities are constantly broadening for the Negro, but civil rights are by no means equal. The Negro is not the only group with caste-like features in the United States. Women have not gained complete equality in many

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[1]T. Lynn Smith and C. A. McMahan, The Sociology of Urban Life (New York: The Dryden Press, 1951), p. 414.

areas of society. Arbitrary barriers of age, sex, color, place of birth, family status, and group affiliation constantly operate to keep alive caste-like features in the social structure of the United States.

Stratification

Social stratification is another hypothetical construct to aid in the understanding of the social hierarchical arrangement of society. The term was borrowed from the field of geology. The geologist refers to rock strata and physically demonstrates the layers of rock of varying composition. The sociologist uses the term in an analogical concept. In a society, classes are not distinct and contiguous as are the rock formations. The positions occupied by man are along a continuum and class formations are but statistical groupings. Social strata are the social classes thus formed. Because society forms a continuum of status, power, and prestige, the arbitrary classes are analogically thought to form strata.

Stratification may be a static or a dynamic concept. In the static sense, social stratification is the view of society in which everything is simultaneously stopped and a complete cross-section obtained. The relative positions and size of the social classes are obtained for that specific

time. In the dynamic sense, social stratification is the process of assigning and achieving differential status.[1]

Differential Status

People achieve or are assigned statuses which differentiate them. Differentiated statuses are established by varying ranks of prestige, privilege, and power. Within each status category exist subcategories and differences so that each individual occupies a niche slightly different from that occupied by any other.

A person may possess many statuses simultaneously, some being inherent and some being achieved. Status differences such as age, color, or sex are inherent. As a result of ability and accomplishments, other statuses, such as physician, professor, or burglar, are achieved. The superordinate-subordinate ranking of statuses may be established by differences in economic condition, occupation, prestige, privilege, and power.

Economic Holdings.--The acquisition of property causes the market to be restricted and develops a power of economic holdings which leads to the development of class

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[1]Cuber and Kenkel, op. cit., pp. 11-12.

formation.[1] Warner and his associates believed that the fundamental structure of our society was economic.[2] In the pioneer study of Yankee City, the Warner group worked on the premise that the economic aspects of the culture dominated the thinking and actions of the people. They hypothesized that individual status and class formation were basically an economic matter, and they interviewed the people in Yankee City to support the thesis. Warner and Lunt report that the interviews demonstrated that economic holdings and occupation were important in establishing status but were not the only determinants.

> When we examined the business and industrial world, we discovered that bankers, large manufacturers, and corporation heads also were not ranked equally but were graded as higher or lower in status. An analysis of comparative wealth and occupational status in relation to all the other factors in the total social participation of the individuals we studied demonstrated that, while occupation and wealth could and did contribute greatly to the rank-status of an individual, they were but two of many factors which decided a man's ranking in the whole community.[3]

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[1]Max Weber, "Class, Status, Party," Class, Status, and Power, eds. Reinhard Bendix and Seymour M. Lipset (Glencoe: The Free Press, 1953), pp. 72-73.

[2]W. Lloyd Warner and Paul S. Lunt, The Social Life of a Modern Community (New Haven: Yale University Press, 1941), p. 81.

[3]Ibid., p. 82.

The social status of a person is affected also by the method of acquiring wealth. Inherited wealth adds to the family position and the status of each member in the established lineage. Hence wealth which is acquired within a lifetime does not assure admittance into the uppermost ranks.[1]

Prestige.--Prestige is a value concept. Individuals are differentially valued because of associations, offices held, opinions, performance, or any number of things to which others attach significance. Prestige is felt through the emotions of pride and shame. In the latter sense, it could be considered an emotional state of the mind, but an emotional state may be created through a rational evaluation of cultural significance.

Occupation.--Warner and his associates found occupation to be an extremely important element contributing to one's status. According to Miller and Form, "Occupation is perhaps the most important factor which underlies the status structure of both the community and industry."[2] Occupations seem to establish status irrespective of the persons in them.

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[1] Ibid., pp. 82-86.

[2] Delbert C. Miller and William H. Form, Industrial Sociology (New York: Harper and Brothers, 1951), p. 367.

Many attempts at rating the status or prestige of occupations have been made.[1] The scales generally agree in attributing the highest status to the professions. Large business owners and executives are given high status, white-collar workers higher than manual workers, skilled manual workers higher than semi-skilled; the unskilled laborer ranks lowest.

Occupational status ratings are fraught with subjectivity. A person in a given position frequently views his job differently from one who is not acquainted with the position. Form found that manual workers rate their jobs higher than clerical work. On the other hand, clerical workers rate their jobs higher than manual labor.[2] People who do essentially the same work often are rated differently. A supervisor of janitorial personnel will be rated lower than a supervisor of clerical personnel, yet both are working with people in similar ways.

Power.--Status may be greatly differentiated by the concept of power. Power is always present in groups; ordering and obedience are necessary to organizational progress.

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[1]For example see (1) U. S., Bureau of the Census, Sixteenth Census of the United States: 1940; (2) Leonard Reissman, Class in American Society (Glencoe: The Free Press, 1959), pp. 401-402; (3) M. E. Deeg and D. G. Paterson, "Changes in the Social Status of Occupations," Occupations, January, 1947, pp. 265-68.

[2]Miller and Form, op. cit., p. 368.

Power may operate on many levels and take many forms of behavior. Cuber and Kenkel define power as "the ability of an individual to control some part or parts of other persons' behavior in conformity to the former's will."[1] The definition is equally applicable to groups as power wielders. The supervisor of the wire-drawing department has power which he uses to meet production schedules. But the plant superintendent and top management use their power to limit the supervisor's power. Unions operate to limit management power and laws are formed to limit both union and management.

Power may be measured in behavioral changes of the subjects. If the subjects are very obedient or submissive, the wielder has great power. In this sense power is always relative. It is change of behavior which indicates the power, but behavioral change implies a comparative situation. It is a change from existing or normative behavior. The use of power need not be harsh, conscious, calculating, or autocratic. Miller and Form indicate that true power may be executed in many different ways.

> People get things by using indirect, amorphous, and even benevolent or democratic methods. But irrespective of how power is exercised, its

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[1]Cuber and Kenkel, op. cit., p. 7.

core is clear. It is group manipulation for desired ends.

> Power used in this sense includes many phenomena which parade under such words as "influence," "leadership," "collaboration," "authority," "coordination," "adjustment," "realignment," and "reorganization."[1]

Complete control or power is seldom if ever wielded. Power is relative and usually takes one of the more subtle forms. At the other extreme, a truly anarchistic organization probably does not exist. Social order imposes restrictions on persons and at the same time gives them differential power and status.

Privilege.--All groups bestow certain perquisites upon some persons and deprive others. Many positions toward which man struggles do not reward him with high salaries, but they offer him certain privileges that other people do not have. A university professor may cherish the library facilities and the long summer vacation in which to pursue knowledge unhampered by scheduled classes. Some privileges are merely extensions of other privileges. For example, a business executive may be allowed to dictate personal correspondence to his secretary, or a wealthy person can afford to hire servants to do his menial tasks. Privilege also may be

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[1]Miller and Form, op. cit., p. 311.

a differential probability. The probability of a Negro becoming the president of a large corporation is very remote, yet there are no formal restrictions barring him from the position.[1]

Differential status also distributes disprivileges. The industrial executive does receive a high salary, has a nice home, automobile, and many other privileges. However, he is expected to dress well, work until midnight if necessary, attend meetings in other cities, give speeches, belong to civic organizations, and contribute to civic and welfare organizations. On the whole, privilege of higher status is greater than disprivilege. The groups of low status bear the burden of disproportionate social privilege and disprivilege.

The Warner Method

Warner and his associates have contributed prolifically to the field of class determination. Through several community studies and through studies of institutions, the group has expanded the existing knowledge of social class structure.[2]

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[1]Cuber and Kenkel, op. cit., p. 6.

[2]Warner and Lunt, op. cit.; W. Lloyd Warner, Marchia Meeker, and Kenneth Eels, Social Class in America (Chi-

Warner defines social class as "two or more orders of people who are believed to be, and are accordingly ranked by all members of the community, in socially superior and inferior positions."[1] Working on this definition, the Warner group used subjective evaluations of the members of the community to establish class subdivisions. The definition implies that each member of a community knows the class in which he belongs and the class membership of his acquaintances. The social class, according to Warner, is an existing entity, a known phenomenon, and not a tool of the sociologist.

> These social levels are not categories invented by social scientists to help explain what they have to say; they are groups recognized by the people of the community as being higher or lower in the life of the city. . . . The designations of social levels are distinctions made by the people themselves in referring to each other.[2]

People who do not fit neatly into any of the classes, Warner believes, are in the process of moving up or down the social

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cago: Science Research Associates, 1949); W. Lloyd Warner, American Life (Chicago: University of Chicago Press, 1953); W. Lloyd Warner and Paul S. Lunt, The Status System of a Modern Community (New Haven: Yale University Press, 1942); Warner and Abegglen, op. cit.; W. Lloyd Warner and J. O. Low, The Social System of the Modern Factory (New Haven: Yale University Press, 1947).

[1] Warner and Lunt, Social Life of a Modern Community, p. 82.

[2] W. Lloyd Warner et al., Democracy in Jonesville (New York: Harper and Brothers, 1949), pp. xiii-xiv.

ladder.[1] There are people who enjoy higher or lower status in a class and there are those who Warner believes are mobile. In this study, the phenomenon of differential status is viewed as a continuum and the social class as a tool. Warner also admits that not all people in Yankee City are aware of the minute distinctions of class structure. In some interviews it is obvious that the people have varying notions of the number, size, and structure of class formation.[2]

In community studies, Warner utilized two methods of determining the social status and class position of an individual. Warner has called the two methods E. P. (evaluated participation) and I. S. C. (index of status characteristics). Underlying the use of E. P. is the belief that the kinds of participation a person has in formal and informal groups are known to others and serve to give him status. The activities in which he participates are themselves ranked by members of the community. Evaluated participation is assigned to persons through a process called matched agreements. During interviews, people list groups in order and assign their acquaintances to the various groups. The class

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[1]Warner and Lunt, Social Life of a Modern Community, p. 90.

[2]Ibid., pp. 81-91.

structure is established eventually by comparing and aligning the information supplied by the various informants. After the general structure is established, individuals mentioned by the informants are placed in the structure by the same matching procedure.

The index of status characteristics is the sum of a series of weighted sub-indices. Occupation, source of income, type of house, and dwelling area are assigned ratings on a seven-point basis. The four ratings each are multiplied by a weighting factor (occupation -4, source of income -3, type of house -3, area -2). An I. S. C. of 12 would be the lowest number one could obtain and 84 would be the highest. The lower the score, the higher one is placed on the social class ladder.[1] Actual placement of the person in the class structure is done either in conjunction with E. P. ratings for the community or by referring to a scale used by Warner and his associates in the study of Jonesville.

Warner has made outstanding contributions to the understanding of social stratification. Briefly, he discounts the idea that American social class is merely an economic class. At the same time he has established that occupation is not the sole basis of American social structure;

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[1]Warner, Democracy in Jonesville, pp. 35-54.

both occupation and wealth are important. The instruments of evaluated participation and index of status characteristics are aids in dividing society into groups of people who have similar social status.

Status and Class Structure of Industry

Occupation is an important factor in the process of conferring status on an individual. The status of an industrial worker is established by formal criteria and informal relations. The worker brings status with him into the plant and he gains a factory status. The two statuses blend to create a social status in the community.

Status Factors Brought to the Work Plant

Many factors contribute to the status of the individual worker. Some of the more important of these are age, sex, race, ethnic background, kinship, and education.[1] Each factor allows the employee entering a work plant to hold some preconceived ideas about rights, privileges, power, and prestige which he can expect at the work plant.

Age.--Age traditionally has been given deference in work plants. The master craftsman had the time to master

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[1]cf. Miller and Form, op. cit., p. 357; Edward Gross, Work and Society (New York: Thomas Y. Crowell Company, 1958), p. 434.

the skills and the young had to wait and learn from him. To develop skill, a long period of time was necessary. Much of the age prestige is still present in factories today. The average age of skilled workers is higher than that of semi- or unskilled workers.

Old age and long service frequently are recognized by rewards such as pins, gold watches, or testimonial dinners. Older workers may be preferred because of their accumulated knowledge and dependability. Because of family obligations, most older workers are more cautious about losing time and moving to new jobs.[1] The aged worker is not always admired in industry. He is frequently pitied because he has to work. At the same time, he may be resented because he is holding a position that a younger, more capable person could have.[2]

Discrepancies in conferment of status occur also among youth. A person may be well educated and competent for the position, but if he is extremely young, he will be given respect grudgingly. No matter how competent the youth may be, he is expected to move up gradually and not to step

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[1]Miller and Form, op. cit., pp. 357-58.

[2]Gross, op. cit., p. 434.

right into an authoritative position.[1] Rare is the exception.

Sex.--Traditionally women have been delegated the tasks involved in keeping the home and rearing a family. Gradually they have entered the industrial labor market and have completely dominated some occupations. Stenographers, typists, secretaries, librarians, milliners, and many other occupations are almost entirely assigned to women. Frequently men are used in these positions in an administrative capacity. The head librarian or the head milliner frequently may be male. Such positions have a tendency to degrade the status of a man unless the position does have authority and administrative duties.

Women frequently work in industry in order temporarily to bolster the family income. Temporary female workers compete with men who may wish permanent positions. Men, therefore, use formal and informal devices to keep women out of their jobs.[2]

Women supervisors are not preferred by either men or women. Men especially feel that working for a woman lowers their status and the status of the department. Men

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[1] Ibid., p. 435.

[2] Miller and Form, op. cit., pp. 362-63.

frequently rationalize their dislike for women supervisors by claiming they are too emotional, or they hold grudges, or they are more demanding than men.[1]

Racial and Ethnic Background.--In the United States, the native-born Caucasians have always enjoyed a higher status than the foreign-born or colored races. Gross describes the low status of the typical American Negro entering the work plant and indicates his poor opportunity for improvement.

> The American Negro brings with him profound disadvantages: he is usually poor; he has had little or no training in skilled work; his education is likely to have been poor; he was often uprooted from the land tenure system of the South because of low income, debt, or mechanization; and--as important as any of these factors--he has come with a lack of a tradition of success so that his hopes and aspirations themselves limit his ability to rise.[2]

Negroes seldom are employed in positions of high status. Personnel directors rationalize that they are unintelligent, unskilled, undependable, and irresponsible. Miller and Form claim that a thorough analysis of Negroes in industry indicates that they are still new and not acclimated to patterns of modern industry. Plants that have recognized this lack have been more successful with Negro employees.[3]

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[1] Ibid., p. 363.

[2] Gross, op. cit., p. 618.

[3] Miller and Form, op. cit., p. 366.

Negroes are barred from some occupations on the basis of prejudice alone. Workers feel they are dirty, ugly, ignorant, and unfit to work beside. Separate facilities such as washrooms, lavatories, and dining halls are frequently provided. Unions also may refuse admittance to the Negro. He enters the work plant with a low social status rank and has little hope of upward mobility.[1]

Ethnic groups enter the work plant with the same handicaps as the Negro. Because skin pigmentation does not usually serve as a permanent barrier, ethnic groups are assimilated or at least acclimated much faster than racial groups.

Discrimination against ethnic and colored groups is very likely to take the form of prevention of learning. A foreign-born person may have the necessary formal education, but the specific job skills and tricks of the trade are withheld. If the social skills and tricks of the trade were taught, it would confer equal status on the foreign-born.[2]

Kinship.--Few industries place restrictions on the employment of persons related to other employees. Universities, on the other hand, frequently will not hire a professor who is related to a staff member.

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[1] Ibid., p. 367.

[2] Gross, op. cit., p. 438.

If a worker is related to the boss, he enters the work plant with a status escape. Others will not criticize him openly. The foreman is likely to overlook his errors and the worker may ignore any mild admonitions from the foreman.

Kinship may act as a ceiling on mobility in a work plant. If the top management positions are held for members of the family, lower management is likely to become frustrated and large turnover occurs. Under these circumstances, a person entering the work plant in an upper management position usually does not receive the status recognition that would normally accompany the position.

Education.--The demand for education is ever increasing in American industry. Skilled workers are not expected to spend long apprenticeships; technicians are not wholly trained on the job; management recruits directly from college; scientists and engineers are no longer expected to spend years in the shop. A premium has been placed on the possession of a college degree. The power of education is recognized in industry. Many workmen attend night school to work toward a college degree or to attain specialized training to prepare themselves for better jobs. Industries conduct many classes within the plant and also offer courses in cooperation with nearby universities.

Status Factors of the Work Plant

The work plant and the occupations confer factors of status upon an individual. Work plant status extends into the community and contributes to the placement of the individual in the hierarchical arrangement of society.

Type of Factory.--In the American culture, heavy industry tends to have more prestige than light industry. Light industry frequently occupies space and buildings vacated by heavy industry. Industries connected with food seem to have less prestige than most of the other industries.[1]

The specific work plant has a particular influence on the status of the individual. Some plants are known as "good places to work," or "places that treat you fair," or "important." As a rule, employees of large industries have more prestige than identical employees in small plants. The plant location and appearance may affect the worker's status.

Occupation.--According to Miller and Form, "occupation is perhaps the most important factor which underlies the status structure of both the community and industry."[2]

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[1] Ibid., pp. 439-40.

[2] Miller and Form, op. cit., p. 367.

It seems a natural development for highly industrialized societies. Caplow believes that there is a consistent tendency for one's occupation to displace such other status-fixing factors as ancestry, religious office, political affiliation, and personal character.[1] The Bureau of the Census uses an occupational scale as an indication of socio-economic status, and many scales have been utilized to measure the relative status of occupations.[2] Occupations are excellent indicators of general social position and a source of other social indicators such as income, power, and group participation. No scale designed to measure status conferred by occupations seems to be infallible; all scales contain discrepancies because status is attributed subjectively in varying degrees by the various groups of society.

Type of Activity.--Status in the factory is established and maintained through the type of activity in which industrial personnel participate. The activity which confers status, Barnard believes, may be categorized as follows: (1) ceremonies of induction and appointment, (2) insignia and other public indicia of status, (3) titles and appellations of office and calling, (4) emoluments and perquisites

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[1]Theodore Caplow, The Sociology of Work (Minneapolis: University of Minnesota Press, 1954), p. 30.

[2]See footnote 1, p. 230.

of position and office, and (5) limitations and restrictions of calling and office.[1]

Ceremonies of induction are almost nonexistent in American industry. They are used extensively in military service and in educational and religious organizations. Industry may use a more informal celebration of promotion in the form of a dinner or party. Industry does use insignia, uniforms, name plates, and many indicia of status. Occupational titles and company or union emblems are used formally to show status. Privileges of office may be many; they may include a private phone, a carpeted floor, special stationary, or a company car. Limitations of occupational position may include language and behavior. A vice president cannot use the vulgarities of speech common in the plant, nor can he join the penny poker game at lunch time.[2]

Class Structure of the Work Plant

Few attempts have been made to show a class structure of the work plant. It is more common merely to show

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[1]Chester I. Barnard, "Functions and Pathology of Status Systems in Formal Organizations," Industry and Society, ed. William Foote Whyte (New York: McGraw-Hill Book Company, Inc., 1946), p. 50.

[2]Ibid., pp. 50-52.

how industry affects the status of the individual and consequently how it affects his class position. Miller and Form believe that any social organization has a class structure and they discuss class formation based on economic status only. They believe that status position is affected most by the wealth one is able to accrue.[1]

In the top social class of a factory are the president and perhaps the vice president. This class receives the largest salary and many perquisites such as stock dividends, automobiles, or even homes. The next class or two also include salaried personnel, but the salaries are much lower and the perquisites are few, if any. In the next class or two are skilled workmen and white collar workers who are paid hourly. The lowest class includes unskilled laborers such as watchmen and janitors.

Members of the lower classes also have status. Such persons obtain status primarily through informal organization. A workman may well turn down a position as foreman because he does not feel himself capable of dictating to his fellow workmen. He feels that he would lose status in the informal group and he is insecure concerning his acceptance in other informal groups.

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[1]Miller and Form, op. cit., pp. 380-403.

Stratification and the Industrial Arts Program

From the foregoing analysis of stratification in the population of the United States and industry, ten important facts have been selected. These significant facts have many implications for the industrial arts program.

1. Social classes in the United States are no longer distinct categories.

2. Status may be thought of as being scalar and social classes as abstractions used in a statistical manner.

3. Barriers to social mobility which are arbitrarily imposed contribute to a caste system; functionally imposed barriers contribute to open classes.

4. Arbitrary barriers of color, age, sex, family status, and group affiliation are operative in the United States but are no longer as strong as they once were.

In the early history of the United States, social class structure was more rigid than it is today. Barriers to social mobility were strong and arbitrarily imposed. The upper classes, principally, were educated. Slavery formed a rigid caste system. In a relatively short time the nation has made substantial progress toward an open-class system based upon functional barriers. Today arbitrary barriers are becoming weaker, and status is granted more by ability

and achievement. Distinct lines between classes are no longer present. Social class stratification may be regarded as a tool to aid in understanding the social status system which exists. Social groups based on likenesses of income, occupation, neighborhood, and other factors become segregated in society.[1] The segregation has become less distinct within the present century.[2] The nation has become highly interrelated, on the basis of specialization and division of labor. Proportionately, the middle classes have become larger and the extreme classes smaller. The schools have been instrumental in the change. Only through education can specialization develop. The schools must continue to help by providing specialized fields of education. They must also help students to understand the values of an open-class system and how it can be obtained. The industrial arts program must help students to understand the role of industry and occupations in the operation of functional barriers to social mobility. It must make barriers more functional by offering industrial arts education to all youth regardless of race, color, sex, nativity, or family status.

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[1] Cf. supra, pp. 185-86, 214-15.

[2] Cf. supra, pp. 67-68.

5. Economic holdings and occupation are two very important status-granting factors; occupation is perhaps the more important.

6. Employees in large corporations enjoy more prestige than identical employees in small plants.

7. Female supervisors are not preferred by either men or women.

8. Workers in the lower occupational classes obtain status through the informal organization.

Many factors are influential in granting prestige and status to individuals, but occupation is probably the most important. Occupation in most cases determines the income of the worker. It determines, to a great extent, the neighborhood in which he lives and the friends he has. Certain occupations have more prestige than others. The schools must help students to understand the relative status of occupations. They must foster an understanding of how occupations can serve as functional barriers to mobility and social status. Students also must be cognizant of arbitrary status-granting factors. Society has faith in bigness; large corporations enjoy more prestige than smaller ones. The prestige is transferred to the employees. A person working in a large corporation will have more prestige than one doing the same type of work in a small plant. In a

similar manner, society places more confidence in male supervisors. Such confidence may stem from tradition and the mores of the nation. Women have been subordinated to men throughout the history of the nation. In recent years, however, they have made great strides toward equality. Although today women have penetrated almost every occupation, they are actually concentrated in a few which they dominate almost entirely.[1] The students in the industrial arts program must be helped to understand the origins of such arbitrary status-conferring factors. They must be helped to view them with respect to the folkways and mores of the nation. The industrial arts program must be careful not to strip artificially all dignity and status from the lower occupational classes. Workers in these occupations do have pride in their work and gain prestige through quality of performance and through the informal organization. Industrial arts students must be helped to understand the values, social advantages, and disadvantages of the various occupations. They must be helped to see these things in relation to their own expectations.

9. Education is the most important vehicle of social mobility.

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[1] cf. supra, p. 69.

10. Discrimination against racial and other ethnic groups frequently takes the form of prevention of learning.

Education has served as the greatest cause of vertical movement through the social classes of the United States.[1] The American people have great faith in education as a means to improve their status. Education has been greatly responsible for the rise in the national level of living. The culture of the nation is expanded through education and specialization. However, denial of education, both through denial of opportunity to attend school and through refusal to permit the inclusion of specific subject matter in the curriculum, has served to prohibit social mobility of various groups. Many occupations are denied to capable persons because they are unable to obtain the proper education. Thus, education can serve both arbitrary and functional systems of social mobility. The schools must continue to serve as vehicles for social mobility. The industrial arts program must provide education toward specialization. It must be offered to all youth regardless of race, sex, or other discriminating features.

Because social classes are becoming less distinct, because arbitrary barriers to social mobility do exist, and

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[1] Cf. infra, pp. 329-31.

because functional barriers aid an open-class system, the industrial arts program must help students to understand the role of industry and occupations in the operation of functional barriers to social mobility. Because occupation is an important status-granting factor, because large industries enjoy more prestige than small ones, and because discrimination does exist in industry, the industrial arts program must help students to understand status-conferring factors of industry in relation to the folkways and mores of the nation. Because arbitrary and functional barriers to social status and mobility do exist, because discrimination exists in conferring status and in opportunities for social mobility and because occupation is a very important factor in granting status, industrial arts must be offered to all students in secondary schools regardless of race, color, sex, nativity, or family status.

CHAPTER IX

COOPERATION AND OPPOSITION

Cooperation and opposition are basic social processes. The perception a person has of a given situation may stimulate him to act in either a cooperative or an opposing manner. However, the same action may be perceived differently by various individuals and groups. These basic processes penetrate into all aspects of culture and social life.

The Nature of Cooperation and Opposition

All behavior is caused.[1] Cooperation and opposition frequently are conceived as the cause of behavior, but most of the time they are thought of as the resultant behavior of many motivating forces. They are names given to definite types of behavior. An individual behaves in a cooperative or an opposing manner because he feels the course he chooses

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[1]Although one of the limitations of this study states that social psychology will not be pursued, a brief psychological explanation is necessary at this point in order to understand these fundamental social processes.

is most in keeping with his own purposes. Snygg and Combs view all behavior as a rational reaction to situations as the behaver sees them in light of his experiences.

> When we look at other people from an external, objective point of view their behavior may seem irrational because we do not experience the field as they do. Even our own behavior may in retrospect seem to have been silly or ineffective. But at the instant of behaving the actions of each person seem to him to be the best and most effective acts he can perform under the circumstances. If, at that instant, he knew how to behave more effectively he would do so. . . . Behavior as seen by the behaver is not due to chance; it is not motiveless. It is a caused and pertinent aspect of the world as he experiences it.[1]

The behaver strives toward goals to the extent that these goals are meaningful to him. The perceptions of the behaver are a result of experience of which he is aware. Snygg and Combs say that the phenomenal field of perception includes all the universe of which the behaver is aware. He is much more sharply aware of some things than of others. A continuum of awareness operates in one's phenomenal field. As an example, the radio is on and a person engrossed in reading a book is scarcely aware of it. However, when the announcement is made of a mine cave-in at a little mining town near his home, he immediately stops reading and listens.

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[1]Donald Snygg and Arthur W. Combs, Individual Behavior (New York: Harper and Brothers, 1949), pp. 12-13.

His awareness of the radio moves from a low level to a high level of differentiation, but the book moves from high to low. Thus, at any one time, field perceptions exist at all levels from the vaguest to the sharpest.[1]

The individual has a concept of his level of achievement. Such a level is very realistic to him. An inmate in an insane asylum may think he is ruling the world. His actions are based on his perceptions, not on actual fact. The inmate is an extreme case, yet he differs from the normal only in degree. All individuals have a concept of their levels of achievement and of their levels of attainability. Some may feel that they are achieving as highly as they can, but most people perceive a gap between potential and realization. The perception of this gap causes an individual to formulate his goals or aspirations.

Individuals compete or cooperate to obtain the goals they seek. Although specific goals of human beings are infinite in number, it seems that there are only two categories of goals toward which they strive. People strive toward material gain and toward prestige. The categories are by no means discrete or mutually exclusive. For example, all people strive for food, clothing, and shelter, which are

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[1]Ibid., pp. 15-17.

material objects. The types and quantities of food, clothing, and shelter confer various levels of prestige. A person will eat, clothe, and protect himself from the elements at a level which he can afford and wishes to afford, but while doing so he will have attained some level of prestige because of the importance placed on the deeds by others.[1] The striving to attain goals and the goals themselves are differentiated according to individual perceptions.

Striving to attain goals may involve striving with others or striving against others. When other individuals are involved the process is social in nature. Striving with others is the social process of cooperation; striving against others is opposition.

Cooperation

Cooperation is working together for attainment of objects or prestige. May and Doob, in explaining cooperation, say that individuals cooperate with one another when:

> . . . (1) they are striving to achieve the same or complementary goals that can be shared; (2) they

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[1]Mark A. May and Leonard W. Doob, Competition and Cooperation (New York: Social Science Research Council, Bulleton 25, 1937), pp. 8-12. This book is a report of a committee on Competitive-Cooperative Habits. The members of the committee were Gordon Allport, Gardner Murphy, and Mark May.

> are required by the rules of the situation to achieve this goal in nearly equal amounts; (3) they perform better when the goal can be achieved in equal amounts; and (4) they have relatively many psychological affiliative contacts with one another.[1]

Cooperation, when viewed by the motives as categorized by May and Doob, embodies many activities or forms of behavior. At one end of the scale would be spontaneous activity in primary groups. A lady sees an article which she instinctively knows her neighbor wants, buys it, takes it home, and gives it to the neighbor. The two women are closely affiliated; they have frequent social contacts of a personal nature. They are members of a small intimate group. Such groups are characterized by warm relations and spontaneity of actions. On the other end of the scale would be the formal, contractual activity in secondary groups. Group projects are pursued and reports are made because two students in the same class are required by the rules of the situation to achieve the goal in nearly equal amounts. The formal and contractual nature of the school and classroom require that the students meet at a certain time and place, with a certain instructor, and under his guidance cooperate in class pursuits. Perhaps even more extreme in their

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[1] Ibid., p. 17.

contractual, formalized structure are business enterprises which are organized to purchase, sell, or produce cooperatively. Not all such cooperative enterprises are known as "cooperatives." To some extent cooperative means are employed by all groups. Indeed, groups could not exist without some degree of cooperation.

Various forms of cooperation along the continuum of cooperative action have been studied and given names.[1] Joint action is a type of cooperation in which the participants do jointly what each could be doing separately. As an example, people who enjoy singing may receive considerable satisfaction in singing individually; however, for many people who sing, choral singing adds to both the music and the satisfaction. Youngsters will spend an hour or more at the swings when in a group, but the same youngsters tire quickly of swinging alone. In joint action the activity can be done alone, but some satisfaction or advantage seems to come from doing it collectively. Mutual aid is similar in that the activity can be done alone, but in this instance the activity of each participant need not be of the same kind. Integrated group action depends on specialization and division of labor.

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[1]Robert L. Sutherland and Julian L. Woodward, Introductory Sociology (Chicago: J. B. Lippincott Company, 1940), pp. 645-57.

Each member of the group does the thing to which he is best suited and collectively the end result is reached. When an individual is aware of his cooperative relationship, his efforts are likely to be more pointed and more generous than when he is not. The cooperative relationship is present in all division of labor. The individual's awareness or perception of his striving for the same goals will differentiate the acts along the continuum of cooperative action.

Opposition

As has been pointed out previously, cooperation is the striving with others toward the attainment of goals; opposition is the striving against them. Opposition is based in the struggle for existence. The struggle, in its various stages or forms, involves greed, selfishness, self indulgence, scarcity, or isolation. Opposition in its milder forms overlaps cooperation. For example, two students competing in the classroom can help one another grow mentally through logical presentation of thought patterns.

Opposition may be classified roughly as being either competition or conflict. Competition is more indirect and impersonal whereas conflict is direct and personal. In conflict one attempts to impede, injure, or even destroy his adversary, but in competition the emphasis is on the

successful attainment of the goal. Competition is a continuous process whereas conflict is intermittent. Open conflict cannot endure; sooner or later an accommodation functions to arrest the situation.[1]

Competition.--Competition occurs when the supply of material goods falls short of demand and opportunity to gain prestige is limited. If there are more people who want a certain type of job than there are openings, competition ensues. There is competition for pay raises, for higher authority, for living essentials, for luxuries, for prestige, and for all things that are wanted by more than one. May and Doob say that competition on the social level exists when:

> . . . (1) they are striving to achieve the same goal that is scarce; (2) they are prevented by the rules of the situation from achieving this goal in equal amounts; (3) they perform better when the goal can be achieved in unequal amounts; and (4) they have relatively few psychologically affiliative contacts with one another.[2]

In the process of competition the competitors are not fully conscious of one another as competitors. The job seeker seldom knows the others with whom he is competing.

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[1]T. Lynn Smith and C. A. McMahan, The Sociology of Urban Life (New York: The Dryden Press, 1951), pp. 588-89. For a discussion of the accommodative process see Chapter X.

[2]May and Doob, op. cit., p. 17.

It is the goal which is sought and not the destruction of the competitor. Competitors enter a competitive situation in an impersonal way. Yet there seems to be a difference between absolute impersonal competition and rivalry. In rivalry the awareness of the opponent brings the competitive process closer to conflict on the opposition continuum.

The continuous nature of competition refers to the relativeness of positions in society. An individual's position is subject to the desires of others, to the changes in the supply of goods and values, and to the dynamic culture which affects goods and values.[1] In a society which is not absolutely static, one's position relative to others is continuously subject to the competitive forces of the society. Goods and prestige gained through competition can be maintained only through continuous competition.

Competition seldom exists in a pure state. Instead of being totally impersonal, acts are frequently conscious and personal. The lawyer allows his emotions of like or dislike to enter his struggle to win a case. A businessman may start to resent the actions of his competitor across the street. Complex rules change the pure nature of competition. The farmer who receives government subsidies and the business

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[1]Sutherland and Woodward, op. cit., p. 642.

which is protected by tariffs no longer are engaged in pure competition. Alterations in the competitive situation which tend to be friendly bring elements of cooperation into the struggle; alterations which are antagonistic tend to turn competition into conflict.

Conflict.--Conflict is always a conscious struggle. The struggle, the one against the other, evokes strong emotions and concentrated effort. The desire to harm or to destroy the rival becomes as important as the attainment of the goal. Strikes, gang fights, wars, race riots, and other conflicts seem to occupy a prominent place in the daily news. Overt malicious struggle is quite obvious.

Conflict may be subtle and unobtrusive. Rivals may seek to undermine one another by calumny and chicanery. Gossip may be used to destroy the reputation of a rival. In monopolizing the market, one may seek to destroy marginal rivals by underselling. Suppressing information may eliminate a potential rival. False propaganda may alter the outcome of a summit meeting between nations.[1]

Both cohesive and destructive forces accompany the process of conflict. Inimical groups, while seeking to

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[1]Emory S. Bogardus, Sociology (New York: The Macmillan Company, 1954), p. 528.

destroy one another as groups, will become more closely knit internally. Once the attack of open conflict has begun, the members of a group strive together in order to annihilate the other group.[1] Thus, conflict strengthens not only the solidarity of the in-group but also the barriers which separate it from the out-group. The social unity between conflicting groups is destroyed by the personal and conscious maliciousness of the conflict.

All groups tend to engage in conflict at one time or another. Some groups are prone to engage more frequently than others. Conflict-prone groups develop characteristic patterns of behavior. Sutherland and Woodward list five behavioral patterns which are characteristic of most conflict groups.

> These groups follow the same patterns of behavior: (1) They are highly self-conscious in respect to their status and welfare. (2) They strengthen their position by marshalling their forces and organizing for the encounter. (3) They designate special functionaries who plan the strategy and lead the group in the conflict. (4) Other special functionaries serve as propaganda and morale experts whose three-fold task includes maintaining unity of attitude within the conflict group, undermining the morale of the opponent, and gaining the support of neutrals. (5) Conflict groups claim victory prematurely for themselves, and admit defeat only with the greatest reluctance when further resistance is futile.[2]

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[1] Sutherland and Woodward, op. cit., p. 661.

[2] Ibid., p. 662.

In time of war, the military serve to plan the strategy and lead the attack. In strikes the agents and officers of the union local must marshall the forces. In race riots the maintenance of unity of attitude and the undermining of the opponent's morale is an essential element. Throughout the five behavioral patterns, loyalty to the in-group is bolstered while hate and feelings of antagonism are fostered toward the out-group.

Cooperation and opposition are both natural to and necessary in society. The two processes are often interdependent. Although many authors have speculated and given convincing arguments as to the importance of the one process over the other, it would seem that both processes are fundamentally based in the nature of society and are therefore neither good nor bad.[1] In the United States, the capitalist economy, the open-class system, the traditions of democracy, and mixture of races place emphasis on the competitive spirit.

Cooperation, Opposition, and Industry

Technology exists as a dynamic force throughout the world. Nations vie against nations for greater advances in

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[1]William F. Ogburn and Meyer F. Nimkoff, Sociology (Boston: Houghton Mifflin Company, 1950), pp. 164-75.

technology. Which nation will successfully put man in space first? Which nation will produce the cure for diabetes? Technology may cause overt antagonism between nations, as in the race for space, or it may bring about more subtle competition.

Technical culture is partly the sum of human tools. The hand saw or the two-man chain saw, the mechanical adding machine or the electronic brain, the hand drill or the electronic vibrating drill, the hand shovel or the huge mountain movers, all represent or contribute to technical culture. Moreover, technical culture is compounded of human skills. The hammer is powerless without man to give it force and direct it; the scalpel is useless without the surgeon; and the electronic brain needs man to supply the basic information and manipulate it.

The human skills must function in relation to the technical knowledge of the past. They must function in relation to the materials and tools which have evolved from past societies. Technology, therefore, helps man to understand the relations between himself and the things and values he uses. If this is true, then technology must create much of the striving throughout the world. Technological change must cause opposition and cooperation. The social institution through which prodigious technological progress has

developed in the United States is the large corporation.

The corporation has brought absentee ownership into the American economy; it has brought about the rise of a management profession; and it has developed the machinery for the prolific expansion of technology. The economy of the United States is frequently referred to as competitive. Being dominated by industry, it may be basically competitive, but it fosters cooperation to a great extent.

The Industrial Economy

Although the concept of the self-regulating market has been persistent, it has been greatly affected by divergent ideas. Its persistence can be attributed in no small measure to the nation's youth and to its abundance of raw materials and economic opportunity. Such a society creates an abundance of gain seekers. The industrial revolution has served as a force in another direction. Two other forces stem from Veblen's cultural analysis and Dewey's instrumentalism.

Economic thinking is thus affected by the theories and conditions which prevail. At the time that Adam Smith published The Wealth of Nations, mercantilism was prevalent throughout the Western world. The American colonies were revolting against economic bleeding and trade suppression.

Free trade was a fervent desire. Today, economic theory is building on a philosophy of social adaptation and an expanding technology.

The principal concern of modern enterprise is no longer the acquisition of profit, but the avoidance of loss.[1] In a trading economy the focus is on the past, whereas in an industrial economy the focus is on the future. Separate and independent trade transactions are tabulated and differentiated in a trade economy. The industrial economy depends on future planning, a long-term process of organizing materials, machines, and human beings.

The measurements of costs are all in the past in a trading economy. Profits are measured by comparing the present income over previous costs. The essence of a trade economy is its profit, its projection of the future over the past. In an industrial economy the costs are in the future and in the present. Profit must entail the calculation of present and future costs. In the industrial economy, profit is derived in the same manner as it is in the traditional economy; it is the difference between current costs and current production. But in an industrial society, such

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[1]This discussion of "avoiding loss" is based on Peter F. Drucker, The New Society (New York: Harper and Brothers, 1950), Chapter 4.

profit must also be the premium for the risks of the future. The future risks must be derived or estimated and offset by the apparent profit of the present. In the industrial economy, profit has become primarily a functional tool for avoiding loss.

Loss is the decrease in the ability to produce economically useful goods or services. It diminishes the productive potential. The prevention of loss should be the principal concern of the industrial economy. If loss is not offset by profit, it may consume productive resources. A corporation which operates at a loss is endangering its future economic performance; it is impoverishing the economy and reducing economic production. Future risks must be avoided by setting aside adequate reserves out of the current profits.

The costs of staying in business are derived from replacement, obsolescence, risk proper, and uncertainty. (1) Replacement is necessary in any enterprise. No enterprise will remain solvent unless it replaces old and worn equipment with new. Equipment and human resources which have to be replaced must be done so out of current production, regardless of how the costs may be defrayed. (2) Obsolescence is caused by the rate of change, which may be dangerous and unpredictable. Change is spasmodic. By the time missiles

are operative, they are obsolete. Much of the equipment for producing them is also obsolete. For example, some of the extremely hard materials required for missile production cannot be machined by any of the machining processes which were known as late as 1955. (3) Risk proper is the risk of acceptability and marketability of the product or service. After the expense of perfecting and producing a product, will the public use it? (4) Uncertainty, though similar to risk proper, is concerned with the length of time the product will be acceptable. Many products are economically unsound unless they will be desired for many years.

The enterprise is a social institution; it must be used to the interest of society. Drucker points up the coincidence of enterprise's self-interest and the interest of society, namely, the avoidance of loss.

> The demands of economic performance which society makes on the enterprise are identical with the demand of the enterprise's self-interest: the avoidance of loss--that is, operation at a surplus of current production over current cost adequate to cover the risks of the future. There is no conflict between the social purpose and the survival interest of the enterprise. Both are in harmony; both stand under the same rationale; both are measured at one and the same time by the same yardstick.[1]

The avoidance of loss is the basic and most urgent concern of

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[1] Ibid., p. 63.

industry and society. The risks of production and marketability must be avoided through current production.

Increased productivity is the next most urgent interest of industry. Increased productivity is genuine surplus; it is a return of capital. Through genuine surplus capital resources are redistributed. The enterprise may use the surplus to produce more of the same commodity, to reduce the price, or to raise the real wages. Also, the enterprise may distribute the surplus as profit.[1]

One of the greatest problems of the industrial economy is the need for an increasingly efficient system of production. The funds created by the increased production do not necessarily nor automatically flow back into the market. Therefore, advocates of economic planning recommend that measures be taken to divert income from savings to a mass consumer power or agent. Economic planners feel that deficit financing and increased production are not the solution. It is only through the transfusion of income that inflation and depression can be solved. The sliding scale of personal income tax works on this principle. No adequate way has yet, however, evolved by which purchasing power is readily transferred to the poor.[2]

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[1]Ibid., pp. 64-67.

[2]C. E. Ayres, The Industrial Economy (Boston: Houghton Mifflin Company, 1952), pp. 130-251.

The competitive market in the sense of a laissez faire system does not exist. A competitive market does exist when the consumer has alternate choices in the satisfaction of the same need and when the choices significantly affect the size of the market and the price of the product.[1] Competition plays a significant role in the industrial economy.

Not all industries in the industrial economy are competitive. The American Telephone and Telegraph Corporation operates as a monopoly. Such monopolies are usually public utilities and operate under close governmental regulations.

Industries which are competitive vie with one another for status within the economic order. The economic status of industries may be measured in part by the value of output. Two industries may have a total production of equal value, but one may employ twice as many workers. Thus, the number of workers an industry employs has a great deal to do with its economic status. An industry with a large number of workers usually has a larger investment than one with a smaller number, but this is not always true. A highly automatized industry may have a much lower proportion of workers than an industry which is not highly automatized. The value

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[1]Drucker, op. cit., p. 279.

added is the transformation of raw materials into productive commodities for consumption. The value of output, the number of employees, and the value added by the industry, all contribute greatly to the economic status of an industry.[1]

The product of an industry has much to do with its place in the economy and its competitive position. The product, according to its demand, is either producer's goods or consumer's goods. That is, goods such as lathes, furnaces, or cement will be used toward further production; goods such as food, clothing, or cigarettes are produced for immediate consumption. Consumer goods which have a short life of a year or less are known as nondurable goods. Durable goods are those which last longer. Durable goods are those which are not likely to be purchased when buying power is low. Nondurable goods are much more stable. The stability, however, is relative. The demand for food may be relatively stable, but the kinds of food may vary greatly as the purchasing power of the nation rises or falls.[2]

Competition is greatly relied upon to coordinate the vast economic system. Although the United States overproduces

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[1]E. B. Alderfer and H. E. Michl, Economics of American Industry (New York: McGraw-Hill Book Company, 1950), pp. 4-5. Also see Raymond T. Bye, Principles of Economics (New York: F. S. Crofts and Company, 1947), Chapter 1.

[2]Alderfer and Michl, op. cit., pp. 4-7.

in some areas and underproduces in others, the economic system still functions primarily through competitive efforts. The competitive economic system maintains a balance of goods produced and directs the flow of raw materials, labor, and capital relative to the demand. In the United States, laws make it a crime to suppress economic competition. The struggle over products, size, technology, and other features functions among industries as a competitive force for prestige and goods.

Industrial Conflict

Industrial opposition which becomes personalized and direct leads to conflict. Whereas competition is encouraged and desired in the industrial economy, conflict is detrimental. Laws make many conflict-actions criminal offenses. For this reason conflict in the economic market is restricted to more subtle means. Calumnious accusations are made about "Brand X," but enough is said to make it obvious which brand it is. Advertisements may seek to make the consumer believe that one company is being discriminated against. Most cities have better business bureaus, civic organizations like the Rotary clubs, and investigative committees to curb the chicanery used by conflicting business establishments. The racket squads of the police forces all over America are

constantly fighting the marginal and even criminal behavior of conflicting business enterprises.

When industrial conflict is studied, it is obvious that most conflict is between labor and management. The American industrial system by its bureaucratic organization tends to divide labor and management. Through collective bargaining industry and labor attempt to avoid open conflict. Nonetheless, conflict occurs; strikes are the outward manifestation.

Once a strike has been called, the union must help feed and clothe the workers. Morale must be maintained. Mass meetings which keep the workers rallied behind the demands are essential. Special systems of communications may be used. Above all, the workers must be persuaded that no one shall report to his job. Certain exceptions are made in cases where equipment must be maintained, but no productive work must be allowed. Workers may have to picket on shifts. The factory gates must be well picketed to prevent workers from changing their minds. The employer must be made to feel the effects of the strike.[1]

In the event of a strike, employers can shut down the plant and wait for the strikers to come to terms. If a

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[1]Sutherland and Woodward, op. cit., p. 664.

substantial supply of goods is on hand, they may attempt this; however, the Taft-Hartley Act admonishes industries and workers to bargain in good faith and establishes a cooling-off period.[1] In some cases, industries have tried to function with non-union personnel. Violence frequently has occurred when the plant has continued to operate. Violence may cause the intervention of law enforcement. Strikes which impair the national security may cause governmental intervention.[2]

The propensity to strike has been studied by Kerr and Siegel. They found that the nature of the industrial environment--its tendency either to direct workers into isolated aggregations or to integrate them into the general community--affected the propensity to strike. They consider this hypothesis most tenable in the extreme cases in which industries are either highly prone to strike or virtually strike-free. It would seem, then, that propensity to strike would rise in an industry where workers were more isolated,

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[1]Gordon F. Bloom and Herbert R. Northrup, Economics of Labor Relations (Homewood: Richard D. Irwin, Inc., 1955), Chapter 22.

[2]Cf. infra, pp. 306-11.

and would fall with a greater degree of integration into society.[1]

Industrial conflict is an expected occurrence. Without conflict of interest and desires, law and government would not be needed. Without conflict little social change would occur. Conflict cannot be said to be pathological. In many cases strikes attain goals which are very beneficial socially and which could not be attained by other means. As industry expands, the destructive power of conflict becomes greater and would result in annihilation without the social control which has been developed. The bases of both conflict and reconciliation are deeper and broader than ever before. All industrial conflicts are eventually subdued; some type of accommodation or resolve is accomplished.[2] Industrial conflict, like all conflict, is intermittent.

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[1]Clark Kerr and Abraham Siegel, "The Interindustry Propensity to Strike--An International Comparison," Industrial Conflict, ed. Arthur Kornhauser, Robert Dubin, and Arthur Ross (New York: McGraw-Hill Book Company, 1954), pp. 189-212.

[2]Arthur M. Ross, "Concluding Observations," Industrial Conflict, ed. Arthur Kornhauser, Robert Dubin, and Arthur Ross (New York: McGraw-Hill Book Company, 1954), pp. 531-32.

The Cooperative Movement

In the early nineteenth century, the conditions under which factory workers had to work were deplorable. Robert Owen, a factory owner, appealed to other factory owners to rectify the miserable conditions. In his own plant he conducted experiments aimed at improving the state and increasing the happiness of his workers. Among other things, he advocated that the workers own their machines. William King, a physician, also worked to better the conditions of the workers. He published a magazine, The Cooperator, in which he advocated methods of cooperation on self-help. As early as 1829, he had worked with groups and reported the organization of several mutual aid associations. They did not last.[1]

Owen and King planted the seed, but the technique needed to establish a permanent movement did not develop until the Rochdale Pioneers formulated the ideals and principles of cooperation. Cooperation as formulated by the Rochdale Pioneers is an economic system within a social system. Its organization involves principles of economics and principles of human relations and democracy.[2]

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[1]Benson Y. Landis, A Cooperative Economy (New York: Harper and Brothers, 1943), pp. 4-5.

[2]This discussion on the ideals and principles established by the Rochdale Pioneers is based upon: Paul Hubert

The ideals of cooperation which concern human relations are universality, democracy, liberty, fraternity and unity, and self-help. Other ideals are basically economic.

Universality is extremely important. No distinction is made of sex, race, creed, or color. Consumer cooperatives are based on the function of consumption; producer cooperatives are based on the functions of production. Open membership is a principle which has remained unchanged in the more than one hundred years since the Rochdale Pioneers expressed it.

Democratic principles are a fundamental part of the cooperative movement. Cooperatives use such democratic practices as the limitation of each member to one vote, irrespective of the number of shares held, and no voting by proxy. Regular reports are required from the executives. Constant education is deemed necessary to keep members informed. Cooperatives also believe in the practice of making their books accessible to the members for inspection.

Liberty is a basic cooperative ideal. Membership is voluntary; members can withdraw at any time. The members are not required to patronize the cooperative exclusively. Since members have free will and the option to

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Casselman, The Cooperative Movement and Some of Its Problems (New York: Philosophical Library, 1952), pp. 2-6.

purchase where they wish, education is deemed necessary. Education instead of coercion is used to foster loyalty.

The ideals of fraternity and unity indicate the concept of brotherhood which cooperatives foster. They strive to eliminate competition within the cooperative's framework. Cooperation is fostered also among other cooperatives. Prejudice is fought through education. Although it is not always possible, cooperatives try to exclude controversial matters from cooperative affairs. They work for the expansion of the cooperative movement throughout the world.

The cooperative was born out of the need for self-help. It seeks to keep governmental aid and regulation to a minimum. The cooperative believes in relying upon its own energy and efforts.

Economic principles evolved from the miserable economic conditions which prevailed prior to 1843. The work of cooperatives is basically economic. They believe in maintaining an accurate bookkeeping system with periodic auditing by impartial and competent auditors. Adequate depreciation, contingency, and other reserves must be maintained. Cash trade is encouraged to eliminate loss and favoritism.

An essential ideal of cooperatives is the elimination of the profit motive and the substitution of the motive of service. The surpluses of cooperative enterprise are

distributed to the customers in proportion to the quantity of business done with the cooperative and not according to capital investment. Capital invested is kept in a secondary position in the business and does not receive a high rate of interest, if it receives any. Invested capital is not considered the main factor in the production of wealth. A high quality of goods and services is more important than profit.

The ideals of a credit union are similar to those of other cooperatives. The union is a group of persons who build up a fund with their own savings. The savings are used to make short-term loans at reasonable interest to members of the group. The credit union operates on the principle of one vote for each member regardless of the number of shares. Every member must subscribe to at least one share. Books are well kept and periodically audited. Credit unions usually select a bank of deposit for the funds rather than invest in stocks and bonds. They must secure a state charter and are subject to state regulations.[1]

Competition, conflict, and cooperation are widespread throughout industry. The economy of the United States is a

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[1]Landis, op. cit., pp. 20-22. Also see Roy F. Bergengren, I Speak for Joe Doakes (New York: Harper and Brothers, 1945) for a philosophical and historical development of credit unions throughout the world.

competitive industrial economy. Competition in the market and within industry affects society in many ways. Conflicts, whether subtle or overt, play an important role in industrial life. Cooperation, both informal and formal, functions in all aspects of industry. These processes are natural to society and should be understood for what they are.

Cooperation, Opposition, and the Industrial Arts Program

The analysis of the social processes of cooperation and opposition has revealed many significant facts which have implications for the industrial arts program. From the many facts, ten salient points have been selected for discussion below.

1. Cooperation and opposition are both goal-seeking processes. Cooperation is striving with others to attain a goal; opposition is striving against others.

2. Groups which have a high degree of homogeneity also have a high degree of cooperative action.

3. In competition, the persons striving against each other have the goal foremost in their minds; in conflict, the struggle becomes personal and animous.

4. Cooperation and opposition are processes both natural to and necessary in a society.

The social processes of cooperation and opposition are integral to and emerge from the purposeful action of two or more persons. Striving is omnipresent; the persons strive either with or against one another. Human beings are purposeful organisms who usually perceive a difference between their levels of attainability and their levels of achievement--they perceive goals. The schools must help young people to learn to evaluate their achievements and abilities in a realistic manner. They must help the students to establish rational goals and ways of attaining them. Goals which can be shared in approximately equal amounts among those striving for them are likely to cause cooperation. The members of a group in which cooperation functions are usually able to attain the goals in nearly equal amounts. If the capabilities of the group members vary greatly, the rules of the situation must regulate the quantity of the goal to be shared. Homogeneous groups, through primary associations and spontaneity of action, are basically cooperative.[1] Goals which cannot be readily shared in equal amounts cause competition. Each member of the group envisions a goal which is scarce and strives against others in hopes of reaching the goal first. Both processes are natural to

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[1]Cf. supra, pp. 202, 210-12.

society and will occur in every classroom. The schools must help groups of students to perceive goals realistically. When the goals can be shared, the students must be helped to recognize the cooperative approach as the most expedient and efficient. On the other hand, teachers must not help establish scarce goals and expect cooperation in attaining them. Scarce goals and competition can be used to help develop students to their fullest capacities. In such cases, the schools must help the young people to see the goal as the most important aspect of the contest. When, in the mind of any member of the group, the goal shifts from the object or prestige sought to impeding or harming the opponent, conflict ensues. Conflict usually means that the goals were not realistically established. When scarce goals are used in the classroom, the teacher must try to make the goal challenge each pupil, not threaten him. The task is difficult because a challenge to one student may well be a threat to another. If it is a threat, the student does not perceive it as being attainable. Therefore, the teacher must help pupils to evaluate themselves and the situation accurately.

5. The avoidance of loss has become the principal concern of the modern industrial economy.

6. Increased productivity is the second most important concern of the economy.

7. Much of the competition in the economy borders on conflict.

The modern industrial economy is basically competitive. In some cases, the goods and services of industry are scarce, causing competition among purchasers. In other cases, the goods and services are plentiful, but the market is scarce. The modern economy is concerned primarily with the avoidance of loss. In order to avoid loss, productivity must be high and savings substantial in order to cover future risks. High productivity of a particular item, however, decreases its value on the market and saving diminish. High productivity, therefore, must be sought through innovation and the expansion of the cultural base.[1] In this way, new markets are created continually and the level of living is raised through accessibility of goods and services. Therefore, the avoidance of loss depends upon increased productivity and vice versa. Competition becomes intense because of the pressure to avoid loss and to increase productivity. Conflict may develop. Large producers may sustain losses in one area in order to gain control of the market and thereby assure a larger profit in the future. Advertising may be pointed and personal. The industrial arts program must help

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[1] Cf. infra, Chapter XIV.

young people to understand the competitive nature of the industrial economy. It must help them to see the necessity for savings by industry to avoid loss and to increase productivity. Students must be helped to understand the necessity to increase the cultural items through productivity and the competitive and cooperative aspects involved. Although the economy is competitive in its general nature, productivity and the avoidance of loss are goals which can be shared by the members of industrial groups and society. Through specialization and division of labor, goods and services are produced. Without the cooperative efforts of large numbers of persons, production of many items would be impossible. For example, the production of steel requires a large number of teams to operate the blast furnace, the coke ovens, the open hearth, and the rolling mills. Even these teams could not function without the hundreds of persons who supply the various raw materials and transport them to the steel mill. Thus, cooperation is also a fundamental part of the industrial economy. Students must be helped to see cooperation as an integral part of the striving for the two most important aspects of the economy--avoidance of loss and increased productivity. They must be helped to understand industrial approaches to increased productivity which include industrial research, improved methods of production, and creation of new markets.

8. Industrial conflict is an expected occurrence.

9. Conflict frequently has constructive results.

Industrial conflicts occur because more than one person or group striving for goals perceive one another as the barriers to those goals. Unions and management both want definite portions of the savings of industry. Workers and management do not agree on the amount of savings needed to avoid loss. Conflict ensues; however, accommodations are made. Accommodations allow the opponents to maintain their own views while working agreements arrest conflict.[1] Since genuine conversion of one point of view does not occur in most accommodations, conflict inevitably occurs again. Conflicts are not always harmful to society. In many cases, the ideas and goals of some members are detrimental to the society as a whole. The settlement of the conflict might, therefore, be beneficial to society. For example, the series of conflicts which brought about child labor laws helped the level of living and general welfare of the nation. The industrial arts program must help students to understand the nature of industrial conflicts and the ways in which settlement is reached. Students must be helped to understand that conflict is usually evidence that opponents do not understand

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[1] Cf. infra, pp. 291-96.

each other's goals. It is evidence that each group views its goals through limited experience. The industrial arts program must help students to understand both labor and management and to recognize the necessity for seeking understanding on the part of each side of a dispute.

10. Cooperatives are based on the idea of working together to accumulate savings and increase productivity.

Cooperatives are economic organizations. They may specialize in financing, purchasing, marketing, or producing. All cooperatives have the goal of increasing the economic status of the group. Through postponement of direct benefits, savings are accumulated and reinvested to increase productivity. As higher levels of productivity are gained, direct benefits are passed on to the members. Cooperatives value members equally. Each member has an equal voice or vote in the business. The industrial arts program must foster an understanding of how cooperatives use the principles of group cooperation in economic pursuits. It must help students to understand that savings and reinvestment are necessary to increase productivity. It must help them to understand the necessity for continuous expansion of production. Industrial arts also must help students to see cooperatives as a means to compete in the industrial economy.

Because cooperation and opposition are goal-seeking processes, because cooperative action occurs in groups with a high degree of homogeneity, because competition is striving against others with goals foremost in mind, because conflict occurs when the struggle becomes personal and animous, and because cooperation and opposition are processes natural to and necessary in a society, the schools must help students to evaluate themselves and the challenging situations accurately. Because cooperation and opposition are goal-seeking processes, because competition keeps the attainment of goals all-important, because the avoidance of loss in industry is an important economic and competitive goal, because increased productivity is both a competitive and a cooperative goal, and because much economic competition borders on conflict, the industrial arts program must help students to see both the elements of cooperation and the elements of competition in industry and the industrial economy. Because much of the competition in the economy is close to being conflict, because conflict is constantly recurring in industry, and because conflict does not always have results which are detrimental to society, the industrial arts program must help students to understand labor and management, the two most important factions in industrial disputes. It must help

them to see that conflict is based on lack of mutual understanding and mutual experiences.

CHAPTER X

SOCIAL ADJUSTMENT

Social systems are formed through social adjustment; all of life is a process of adjustment. Groups and individuals adjust to climate, topographical conditions, and physical environment. The cultural aspects of society also cause groups and individuals to make adaptations in beliefs, reasoning, and behavior.

The Nature of Social Adjustment

Social adjustment is the very essence of the dynamic nature of society. The social, physical, and cultural environments of groups and individuals cause adaptations in their concepts and activities; the very change in concepts and activities causes the various segments of the environment to change. There seem to be two distinct areas of social process which may be considered social adjustment. Accommodation and assimilation are two over-arching terms used in the study of social adjustment. They include such subtopics as mediation, arbitration, conciliation, acculturation, miscegenation, and amalgamation.

Accommodation

Accommodation is a functional adjustment through the modification of behavior. It is the adjustment of hostility among individuals and groups. Conflicts are intermittent. Conflict between unevenly matched opponents may result in the annihilation of the weaker, or in the acceptance of defeat and of domination by the stronger. Such is the caste position of the American Negro. Children soon learn to submit to the wishes of their parents. Husband and wife quarrel, but soon make up. Unions strike, but enter negotiations and a period of peace which inevitably ends in another strike or conflict. Conflicts must be resolved in some manner.

Conflicts result in social order. The social order allows for a residue of antagonism which accounts for the frequent outbreak of conflict. Accommodation, however, does not merely stall conflict; it is a working agreement which permits groups or individuals to live together. It is a conscious organization which may establish domination, toleration, compromise, conciliation, or conversion.[1] These forms of accommodation indicate a scale of adjustment. Some

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[1]T. Lynn Smith, The Sociology of Rural Life (New York: Harper and Brothers, 1953), p. 543.

forms are more highly accommodated than others, but within the same form, degrees of accommodation are frequently discernible. A compromise which embodies more advantages to one party than to the other is less highly accommodated than one in which both parties are affected equally.

Domination.--In some cases conflict forces submission on the part of one of the antagonists. The weaker must submit to the terms of peace as proposed by the stronger or he will be eliminated altogether. Rather than risk complete annihilation, the weaker party usually accepts a position of inferiority and submission.

Subordination and superordination are almost always a part of accommodation. Smith states, "Social interaction on terms of absolute equality is inconceivable, especially if a large number of persons is concerned. . . . Always when human beings mingle with one another the phenomena of subordination and superordination appear."[1] When two strangers meet, they appraise one another in order to establish a working relationship. Society has developed patterns of superordination and subordination. Ordinarily, deference is shown to those who are older, wiser, richer,

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[1] Ibid., p. 546.

or bigger. The entire animal kingdom has developed patterns of domination.[1]

Compromise.--When groups or individuals hold conflicting views, but neither opponent can obtain a superordinate position, compromise may be the resulting action. Compromise is usually the rational avoidance of a prolonged and fruitless battle. In a compromise, each side must make concessions. Each party to the dispute must be willing to yield certain portions of his demands in order to gain others. The process is one of give and take; it makes adjustments in the interests of all parties. Rationality prohibits groups from extending open conflict for long periods. Such is the situation when management and labor are negotiating for an agreement or when the members of Congress are debating the passage of a bill. The formal and contractual nature of the situation allows each party to make concessions without losing status. Sutherland and Woodward point out that a major portion of governmental and social machinery is designed to help groups meet in compromise.

> The courts adjust differences between parties who under the law have equal rights, and the

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[1]Cf. William F. Ogburn and Meyer F. Nimkoff, Sociology (Boston: Houghton Mifflin Company, 1950), p. 180, and William Foote Whyte, Street Corner Society (Chicago: University of Chicago Press, 1943).

> legislature with its committees, joint conferences, and special hearings is an arbiter of the many interests held by its citizens. The rules conferences in athletics, denominational meetings in religion, and the trade association in business serve a similar accommodative function in other phases of our social life.[1]

Compromise is not always feasible; its use is greatly dependent upon the culture. It may be ruled out if the integrity or the social prestige of one party is likely to be jeopardized. On some things compromise is impossible. Cultural features which are accepted by faith, such as religion, cannot be compromised. Religious beliefs of others may be tolerated, conciliated, or completely assimilated, but not compromised.

Toleration.--In toleration no concessions are made and neither party makes any change in policy. Toleration is the reluctant acceptance of an unavoidable thing or situation. Each party feels he cannot compromise, but must bear with others. Religious toleration in the United States may be used as an example. Each religious sect believes that its faith is the only correct one. It strives to obtain new members, but it does not enter into open conflict. It feels the other groups must be suffered, partly because of its own

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[1]Robert L. Sutherland and Julian L. Woodward, Introductory Sociology (Chicago: J. B. Lippincott Company, 1940), p. 675.

belief in fair play and partly because it cannot risk open strife.[1]

Conciliation.--Conciliation is the result of the retention of friendly feelings while carrying on a dispute. Ogburn and Nimkoff explain the friendly nature involved in conciliation and use the cooperative efforts of some church bodies as an illustration.

> In conciliation, friendliness replaces animosity, and cooperation is established. But there is no identity of thought. The two parties work together amicably and respect one another's views, but are not of one mind. The Catholics remain Catholics; the Protestants, Protestants; and the Jews, Jews. In the National Conference of Jews and Christians, for instance, the several churches actively work together and respect one another's views, but retain their own.[2]

Organizations such as the National Conference of Jews and Christians and the Interracial Commission attempt to create a spirit of friendliness among the parties and at the same time to engender a better understanding of all points of view. Understanding is the first step toward conciliation. Marriage counselors attempt to establish conciliation between estranged couples by helping them to discover additional information and understanding about their problems. If one

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[1]Ogburn and Nimkoff, op. cit., p. 182.

[2]Ibid.

party becomes persuaded that he was wrong and his spouse was right, he has been converted.

Conversion.--Conversion is the complete abandonment of one position and identification with another point of view. In this respect, conversion is one extreme of the accommodation process, the other being the annihilation of the disputers. Since conversion is the extreme of the accommodation process in its fullest state or condition, it is actually no longer an accommodation. A complete identification with a new point of view would indicate that a new oneness of thought, or an assimilation, has been achieved.

Assimilation

The process of assimilation, through a commonalty of attitudes, binds individual beings into a unified group. In the process the group learns to think as a unit. Dissimilar attitudes and values become integrated to form a new set to which the group adheres. Such a process is most likely to occur without the participants being aware of it.[1] Originally, sociologists referred to assimilation as the adoption by one group of the cultural patterns and personal

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[1]Emory S. Bogardus, Sociology (New York: The Macmillan Company, 1954), p. 533.

attitudes of another group. The concept has developed to include giving as well as receiving; it is a unifying process. Park and Burgess point out the integrating feature of assimilation in the following definition:

> Assimilation is a process of interpenetration and fusion in which persons and groups acquire the memories, sentiments, and attitudes of other persons or groups, and, by sharing their experiences and history, are incorporated with them in a cultural life.[1]

Social interaction may precipitate various social conditions. Social conflict or accommodation could occur, but this precludes the occurrence of assimilation. Groups which are in conflict, groups which tolerate one another, and groups in a superordinate-subordinate relationship can be assimilated to some degree. The American Negro is highly assimilated in many respects. He identifies himself with the nation, the state, his place of work, and many other features of the American culture. But still he is not assimilated until the culture is mutually shared, without reservations by anyone. Undoubtedly the Negro is assimilated in many smaller groups, but in the nation there exists an accommodation which still reverts to conflict from time to time. In order to say that a racial or ethnic group is

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[1]Robert E. Park and Ernest W. Burgess, Introduction to the Science of Sociology (Chicago: University of Chicago Press, 1921), p. 735.

assimilated, the group must be no longer socially or economically discriminated against and must freely participate in the various social organizations of the community. The group must think and feel like the larger group. It must respond to common traditions and sentiments and display loyalty to the larger group, especially in times of crisis. Assimilation, therefore, is scalar rather than discrete.

Barriers to Assimilation.--The forces which are at work to prevent the complete assimilation of groups are many,[1] but only the more prominent ones will be discussed. (1) Extreme differences in cultural background hinder assimilation. The lack of common cultural elements keeps groups socially distant. The American Indian, for example, is willing to live on segregated reservation land rather than attempt the radical transformation which would be necessary in an integration of the cultures. Indeed, most other Americans would not attempt an integration because they would feel it to be a lowering or degrading experience. The value system of each culture is so distant that neither group can see the mixing of the cultures as a beneficial thing. (2) Prejudice is most frequently inimical to the process of

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[1]This discussion of the barriers to assimilation is based upon Sutherland and Woodward, op. cit., pp. 682-86.

assimilation. Segregation thrives on prejudice; as long as groups are prejudged and set apart, the cultures have little or no opportunity to mingle and to be shared. Prejudice serves to keep groups intact and protects them from the economic competition or the cultural influences of other groups. (3) Biological and physical differences tend to label minority groups and to effect a discriminative isolation. It is easy to eliminate a group from activity if the group is readily identified by color of skin or by some other physical feature.

Aids to Assimilation.--Most factors which are conducive to the process of assimilation are not merely reciprocal features of the barriers which have been mentioned. (1) Individuals and groups which are suppressed and reduced to the status of conscious inferiority have a tendency to borrow the culture of the suppressing group. Cultural features significant to the isolation or suppression often are the very features which become coveted by the minority group.[1] (2) A favorable attitude toward innovation is an aid to assimilation. A tradition of flexibility and a kindly view toward education may contribute to a liberal attitude toward invention and change. Groups which welcome change

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[1]Park, op. cit., p. 6.

are likely to be willing to share cultural traits quite readily. (3) A feeling of security is sought by almost all groups. To a minority group, such as a small ethnic group, the fastest road to a secure status is the acquisition of the cultural traits of the larger group. (4) Prejudice may serve to stimulate assimilation as well as to retard it. When groups are favorably prejudged, the process of assimilation is accelerated. (5) Unifying symbols have the effect of wiping out differences and emphasizing similarities. A municipal baseball team becomes common property. Common goals of war, revolution, or social improvement bring people together and allow spiritual consensus as well as physical groupness. (6) Conscious control of assimilation also is practiced. Propaganda mechanisms such as Radio Free Europe attempt to effect a better understanding of a point of view. Americanization programs have at times attempted to speed up the assimilation of ethnic groups throughout the country. Teachers who receive pupils from other schools try to acquaint them quickly with the rules, both formal and informal, which are part of the culture of the class.[1]

Acculturation.--When individuals of different cultures come into contact, the behavioral change and cultural

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[1]Sutherland and Woodward, op. cit., pp. 686-90.

adaptation of either or both are known as acculturation.[1] The ways in which persons or groups acquire new cultural traits in no way includes biological assimilation. Acculturation is that part of assimilation in which cultural traits are acquired and incorporated into the normal life patterns of a group. It is primarily the cultural integration of the assimilation process. The importance of acculturation in its most elementary form is illustrated in Benedict's discussion of children who had been abandoned in infancy, for all they lacked was the culture acquired from fellow men.

> In Europe, in other centuries, when children were occasionally found who had been abandoned and had maintained themselves in forests apart from other human beings, they were all so much alike that Linnaeus classified them as a distinct species, Homo ferus, and supposed that they were a kind of gnome that men seldom ran across. He could not conceive that these half-witted brutes were born human, these creatures with no interest in what went on about them, rocking themselves rhythmically back and forth like some wild animal in a zoo, with organs of speech and hearing that could hardly be trained to do service, who withstood freezing weather in rags and plucked potatoes out of boiling water without discomfort. There is no doubt, of course, that they were children abandoned in infancy, and what they had all of them lacked was association with their kind, through which alone man's faculties are sharpened and given form.[2]

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[1]Ogburn and Nimkoff, op. cit., p. 185.

[2]Ruth Benedict, Patterns of Culture (New York: Houghton Mifflin Company, 1934), pp. 12-13.

Culture is not only transported and distributed; it is also transmitted and diffused. Park points out that cultural traits are not merely diffused, but in the process of diffusion they are transformed or recreated.[1] In other words, complete acculturation does not occur unless the cultural aspects of the society are completely assimilated.

Amalgamation.--Social assimilation in its strictest sense does not include amalgamation, the biological union of previously distinct racial groups. The dress, speech, thought patterns and other features which bring about a oneness are the bases of social assimilation. Park thinks, however, that if social assimilation is to become a reality, racial differences must be eliminated.[2] Reuter states, "Racial amalgamation is related as both cause and effect to social assimilation."[3] Biological mixing increases the number and intimacy of the social contacts and the resultant mixture increases mutual understanding and personal appreciation through similarities. When people

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[1]Park, op. cit., p. 7.

[2]Robert E. Park, "Assimilation, Social," Encyclopedia of the Social Sciences, Vol. II, ed. Edwin R. A. Seligman (New York: The Macmillan Company, 1930), p. 283.

[3]E. B. Reuter, "Amalgamation," Encyclopedia of the Social Sciences, Vol. II, ed. Edwin R. A. Seligman (New York: The Macmillan Company, 1930), p. 17.

come to think alike, possess similar cultural features, and grant equal status, racial amalgamation may not present a social problem. The English, Germans, and Scotch-Irish are examples of amalgamated peoples.[1] However, there seems to be strong evidence that there is no pure race; that all are of one race, the human race, with infinite varieties of features.[2]

Adjustment and Industry

Industry evolves ways in which to accommodate antagonistic elements and ways to bring dissimilar segments together and fuse them into one. As a social organization, industry uses the processes of accommodation and assimilation to bring about the necessary social adjustments. Workers and management establish working agreements, but hold antagonistic feelings toward each other. Compromises and conciliatory processes are used in order to keep from hindering too greatly the over-all program of industry. Ethnic and racial groups have been integrated to some degree within the labor force. The industrial world is a turbulent one, making the need for social adjustments all the more urgent.

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[1]Bogardus, op. cit., p. 344.

[2]Reuter, op. cit., pp. 16-17.

Accommodation

Since the turn of the century, modern industry and labor organizations have become progressively larger and stronger. Industrial conflicts reach such magnitude that the general public is greatly affected. The economic and social demands of both sides penetrate the society, as a whole, much more deeply than the local situation. A union and an industry involved in a dispute can cripple the economy of the entire nation. The United States is based upon an organic solidarity; the society functions through a series of organs which are interdependent. Social means of accommodating industrial disputes have evolved because of the devastating effect these clashes have on the general public.

The problem of preventing open conflict has received much attention, but attempts at solution have not been too successful. The strike is the union's best weapon. It is to the union's advantage to keep its use defensible in the eyes of the public. To do so, the strike cannot be used too frequently, but its use must be sufficiently probable to be a threat. The chief methods of preventing and settling industrial disputes are collective bargaining and arbitration within industry and mediation, arbitration, and investigation

by the state and national governments.[1]

Collective Bargaining.--Collective bargaining may be on a local or individual plant basis, on a company-wide basis, or on an industry or segment-of-industry basis. Occasionally, employers within a city or geographical area may form an employers' association and bargaining will take place at that level. If the bargaining is not done at the local level, the demands of both sides are formulated locally and passed on to the negotiation teams. Negotiation committees of large labor and business organizations sometimes have many members. In such cases subcommittees may do the actual bargaining, but the large committee establishes policy and formulates demands through representatives from each of the locals. In the prolonged and extensive industrial negotiations, it is through democratic representation that the collective bargaining procedure is made meaningful at the local level.

Collective bargaining is a compromise procedure. Each party comes to the bargaining table expecting to concede some points. The prevailing notion is that a half loaf is better than none. Indeed, many negotiators, in

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[1]S. Howard Patterson, Social Aspects of Industry (New York: McGraw-Hill Book Company, 1935), p. 431.

anticipation of the compromise procedure, will ask for two loaves in the hope that they will receive one. The contest really materializes in one group's ability to ascertain how much of the other group's demands comprise a loaf and how much is padding. In most cases, the economic facts are bared in the negotiations, and the resulting compromises are based thereon.[1]

Conciliation.--In labor disputes, the terms mediation and conciliation[2] are used interchangeably for the process of using a third party who impartially views the case to try to bring about a settlement by persuasion and compromise. The mediator has no vested power by which to force a settlement. In most cases the mediator or conciliator is a representative of the Federal government.

In 1913, Congress passed an act which created the United States Department of Labor. As part of the Department of Labor, conciliation service expanded; in 1917, a

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[1]For a more extensive discussion of collective negotiations, see Gordon F. Bloom and Herbert Northrup, Economics of Labor Relations (Homewood: Richard D. Irwin, Inc., 1955), pp. 144-63.

[2]This discussion of mediation and conciliation is based upon Ibid., pp. 709-17 and Edgar L. Warren, "Mediation and Fact Finding," Industrial Conflict, ed. Arthur Kornhauser, Robert Dubin, and Arthur Ross (New York: McGraw-Hill Book Company, 1954), pp. 292-300.

special division known as the United States Conciliation Service was formed. The Conciliation Service, although frequently criticized, was not replaced by Congress until 1947 when the Taft-Hartley law was enacted.

During the thirty years from 1917 to 1947, the Conciliation Service handled approximately 45,000 cases. Of these cases, the Service claimed that about 90 percent were satisfactorily adjusted. The Service considered its main task to be the peaceful settlement of labor disputes by mediation. In most cases, one of the disputing parties or an interested third party, such as a mayor, would call the Conciliation Service; however, in some cases, the Service proffered its services in order to avoid a strike. In any event, the Service could only offer its services to the parties to the dispute. If both parties were unwilling to meet with a mediator, the Conciliation Service could do nothing about it. It was completely voluntary.

Because the Department of Labor was identified early with the interests of wage earners, the Conciliation Service was mistrusted by industry. Many people became convinced that the Service was pro-labor. The Taft-Hartley law established the Federal Mediation and Conciliation Service as an independent agency. The new agency soon gained the respect of both industry and labor, a necessary element for the mediation process.

Mediation is not conducted by the Federal government only. On the contrary, most states have mediation and conciliation boards. The Taft-Hartley law provided legislation which encouraged the states to mediate in most local affairs. Sometimes the parties to the dispute bring in mediators who are not representatives of governmental services.

The mediator must exert pressure in order to persuade the parties to compromise and accept a settlement which is beneficial to both sides. Personal relationships and pressures such as argument, logical persuasion, and cajolery, are the mediator's main tools. He also makes use of political and social pressures; he urges that the parties consider public attitudes and opinions. Basic to most labor disputes are economic considerations. It is the task of the mediator to help both sides see the impact of economic pressures. In many cases tax exemptions, stockpiling, retirement funds, and other economic actions and demands exert pressures which the mediator tries to channel and to clarify.

Fact Finding.--If ordinary methods of mediation are not successful, a procedure known as fact finding may be used. Fact finding is actually a strong method of mediation. It is used to exert added pressure in cases in which the interest of the general public is adversely affected. Compulsory investigation is conducted by a special board consisting

of members appointed by the President or some governmental agency. The process is based on the notion that impartially assessed facts will dictate a fair and reasonable settlement. In reality, it is added pressure of public opinion by publication of the facts and recommendations of the board, coupled with the sanctions of the President and other governmental offices which force the parties to consider negotiations as recommended. An important feature of compulsory investigation is the prohibition of strikes or lockouts during the investigation. The period is referred to as a cooling-off period because it serves to alleviate some of the tensions and bitterness which originally existed.[1]

Arbitration.--The process of arbitration uses a third party or a board for determining a plausible solution to the dispute. Arbitration may be voluntary or compulsory, as may be the award. Logically, the four possible methods are (1) voluntary arbitration with a voluntary acceptance of the award, (2) voluntary arbitration with a compulsory acceptance of the award, (3) compulsory arbitration with a voluntary acceptance of the award, and (4) compulsory arbitration with a compulsory acceptance of the award. Since

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[1]Patterson, op. cit., pp. 432-33 and Warren, op. cit., pp. 299-300.

voluntary acceptance of the award is seldom used, the second and fourth methods have come to be known, respectively, as voluntary and compulsory arbitration.[1]

Compulsory arbitration is avoided as frequently as possible. Voluntary arbitration is much more in keeping with the democratic ideals of the nation. Voluntary arbitration is used (1) to arbitrate situations in which other methods have failed to bring about a settlement on a contract or (2) as a last resort in the settlement of grievances. Compulsory arbitration is used only in those situations which are deemed detrimental to the welfare of the nation and then only after all other measures have proved ineffective.

Contract arbitration is usually set up for the purpose of settling a single dispute over the formation of a contract. The parties to the dispute agree to accept the decision of the arbitrator on matters upon which they have been unable to agree. Berstein found that in only about 2 percent of all peacetime contracts was the machinery of voluntary arbitration used.[2] Grievance arbitration is

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[1]Patterson, op. cit., p. 432.

[2]Irving Berstein, "Arbitration," Industrial Conflict, ed. Arthur Kornhauser, Robert Dubin, and Arthur Ross (New York: McGraw-Hill Book Company, 1954), p. 302.

frequently provided for in the contract for a given period of time. In such cases the right of strike or lockout is prohibited for the duration of the contract; it is agreed by both parties that grievances not resolved by the internal machinery be decided by an arbitrator.[1] In 1952, the U. S. Bureau of Labor Statistics found that 89 percent of the contracts which they examined had provisions for arbitration of grievances.[2]

Other Accommodations.--Discrimination and prejudice are ever-present modes of conflict. Racial and ethnic groups are found in positions of subordination and toleration. Language, skin color, facial features, and hair type all serve as signs to distinguish racial and ethnic groups. Most ethnic characteristics may be outlived, except for color and facial features. Accents may disappear in second generations, but skin color always remains as a constant reminder of difference. Racial and ethnic groups are thus discriminated against in industry, as they are in the society outside the work plant.

Racial and ethnic work groups may be differentiated culturally from management. Sometimes industry may have

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[1] Ibid., pp. 301-12.

[2] Bloom and Northrup, op. cit., p. 138.

moved in favor of cheap or abundant labor. In other cases industry may have moved in search of raw materials. In still other situations, the workers have migrated in search of better living conditions, religious or political freedom, or personal status and freedom. The minority group always undergoes a cultural disorganization and disintegration. The cultural traits which conflict with those of management must be altered. Often dualistic loyalties and patterns of behavior evolve.[1]

Minority groups may be accommodated to a higher degree at the work plant than they are in society in general. The American Federation of Labor discriminated against Negroes by excluding semiskilled and unskilled workers from its ranks. The Congress of Industrial Organizations adopted an opposite policy which tried to control the price and rights of labor by encouraging all workers to join. In 1955, when the AFL and CIO merged, an anti-discrimination resolution was passed. Recently, many industries have adopted similar non-discrimination plans. On the job the Negro may work side by side with a white person, use the same rest rooms, use the same cafeteria, and receive the

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[1]Edward Gross, Work and Society (New York: Thomas Y. Crowell Company, 1958), pp. 605-14.

same pay. Few Negroes, however, have entered the ranks of proprietors, professionals, or managers. Negroes who have gained equal status in the work plant generally do not have those privileges extended into non-work situations.[1]

Assimilation

Although accommodation and assimilation are discussed separately, they are by no means separate and discrete processes. Friendly accommodations such as conciliation may be considered steps toward assimilation. Compromise and toleration may foster closer relationships and thus spur on the assimilation process. If those who identify themselves with the larger groups are accepted and rewarded, assimilation proceeds rapidly; if they are rejected, however, the minority group adheres to old customs and tends to form strong segregated bonds.

Some racial and ethnic groups are more highly accepted at work than in non-work situations. If there is no conflict among individuals or groups, they are willing to share intimate relationships. Bogardus discovered that native groups with little or no conflict with ethnic groups were willing to admit them into the family by marriage, to

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[1]Ibid., pp. 618-21.

clubs, or to the neighborhood. But groups which differed greatly in color and cultural background were not willingly admitted to intimate associations.[1] The amount of intimacy to which a group is accepted is a direct measure of the degree of assimilation. In work situations, the degree of acceptance into the informal group or organization measures the assimilation which has occurred.

Women.--The percentage of women in the labor force has increased steadily from 14.8 percent in 1870 to 28.5 percent in 1950. Since these percentages were obtained originally from the U. S. Bureau of the Census, they do not include the nonworking housewife. This is unrealistic. However, even when counting only those who were gainfully employed, the number of women in the labor force increased six times since 1870, whereas the population increased only four times.[2] To what extent does this increase show an occupational assimilation of women?

In 1950, approximately 11 percent of all women in the labor force were in the professional and semiprofessional fields. Most of the women in the professions were nurses,

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[1]Emory S. Bogardus, Immigration and Race Attitudes (Boston: D. C. Heath and Company, 1928).

[2]Delbert C. Miller and William H. Form, Industrial Sociology (New York: Harper and Brothers, 1951), p. 128.

teachers, social workers, and librarians. Except for certain administrative posts, nursing, social work, and library work were almost completely monopolized by women. Approximately 27 percent of all the women in the labor force were clerical workers in 1950; about 20 percent were factory operatives; and about 10 percent were in each of the three fields of sales, domestic service, and other services. Women as laborers were almost nonexistent. A few were listed as farm hands. About 6 percent of the women were proprietors or managers.[1] If the numbers are indicative of the acceptance of women, it must be concluded that women are far from being assimilated into the labor force. In areas of work into which women have moved, men have moved out, causing a segregation and an accommodation. Caplow indicates the concentration of women which exists within certain occupations which include both men and women.

> Women practitioners limit themselves for the most part to specialties where most of their clients are women (pediatrics, divorce litigation, remodeling, domestic science, teaching) or to those completely removed from public contact (laboratory and library work).[2]

Four out of five occupational functions are monopolized by

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[1]Theodore Caplow, The Sociology of Work (Minneapolis: University of Minnesota Press, 1954), pp. 230-32.

[2]Ibid., pp. 230-31.

men. Women are not barred because of inability or technical unsuitability, but because cultural attitudes sanction only a few relationships between men and women.

According to Caplow there are two major cultural themes regulating male and female relations. (1) It is disgraceful for a man to be directly subordinated to a woman, except in family or sexual relations. So objectionable is the idea of a woman foreman over a male crew that it almost never happens in industry. Even in the white-collar work of bureaucracies, the issue is evaded. Women who are at supervisory levels typically have only women under them, and the scope of supervisory tasks is quite limited. (2) Intimate groups are composed of either sex, but not of both, except those which are based on family or sexual ties. The lunch group, the coffee-break group, the golfing group, and other informal groups are usually carefully segregated according to sex. When only one or two women are members of a group, they are usually segregated or formally accepted and treated much the same as men. The invasion of women into informal groups threatens the group with changes in speech, dress, and deportment. The barring of women is the result of economic and cultural regulation.[1]

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[1] Ibid., pp. 238-45.

Women are not well assimilated into the labor world. They are highly segregated in the occupations which they share with men. They have almost completely monopolized some other occupations. In these, the entire occupation usually services or is subordinate to an office occupied by a man. The deference shown to women in some cases and the subordination in others are established in the cultural traits of the nation. The progress that women have made toward equality in industry is proportional to the change in the cultural mores which govern their behavior.

Racial and Ethnic Groups.--Racial and ethnic groups have made slow progress in becoming assimilated into the labor force. In early American industries, Negroes and other ethnic groups were sought by industry as a source of cheap labor. As the social structure and mores of the nation changed, ethnic groups moved into a higher form of accommodation and many were assimilated. Groups from northern Europe quickly lost traits which tended to segregate them. They mixed with and became integrated with the larger work society. Other groups with physical traits which are not readily integrated, such as color of skin, shape of eyes, or shape of nose, have not been assimilated into the work society.

Cultural groups possess a pattern, a way of life, a map which one may follow. But a map of China or Puerto Rico is of little use for traveling in the United States. A stranger knowing map symbols of his country will try to apply that knowledge to a map of his new country, but the symbols are not compatible. Thus, in a disorganized way, the person strives to understand the new symbols. Contacts of ethnic groups produce social disorganization, and the path toward oneness of thought and deed is long and difficult.

Gross, referring to the process of acculturation in industry, indicates that ethnic conflict is not declining swiftly but that the work plant continually will be an agent through which assimilation will progress. As industry moves into the Deep South and as the ethnic segregations continue to disperse, the process of assimilation may be aided. Discrimination and segregation may become weaker as the cultures are forced to mix in the work plant.[1]

Social Adjustment and the Industrial Arts Program

From the foregoing analysis of social adjustment in the United States, nine important facts have been selected

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[1]Gross, op. cit., p. 634.

for discussion. The nine points are grouped below to facilitate the discussion.

1. Accommodation is the formation of working agreements which allow persons to maintain their own views and live together without conflict.

2. Conflict is intermittent; it cannot last indefinitely.

3. Assimilation is the integrating process which allows the total group to form a new set of ideas, attitudes, and values.

There are various levels of accommodation. In some cases a minority group is merely tolerated. In other situations, each group compromises and accepts many facets of the other's point of view. Whatever the degree of accommodation, each group maintains some of its previous attitudes which differ from those of the other group. However, a working agreement is established so that a conflicting situation can be postponed. Conflict is a destructive force unless accommodation of some sort is achieved. Whether conflict is resolved by accommodation or by annihilation of one of the opponents, it is eventually resolved. Because conflicts cannot last indefinitely, they are intermittent; they are resolved only temporarily and will flare up again. Accommodation is, therefore, an arresting mechanism. While delaying

conflict, the process of accommodation may be an aid to the process of assimilation. When two or more groups become so well adjusted that they no longer have divergent ideas and values but share a common ideology, they have become assimilated. The schools have been instrumental in helping various minority groups become accommodated and assimilated. In the schools, the children of minority groups learn the folkways and mores of the nation; at the same time, they are afforded an opportunity to explain their own views, folkways, and mores. The schools must continue to help youth to learn and understand the folkways and mores which are characteristic of the whole nation. The industrial arts program must help young people to understand the folkways and mores of American industry. The industrial world is foreign to most youth; the industrial arts program must help them to see industry as an integral part of the society in which they live. It must help them to understand and to accept the ideas and values of the industrial economy in a free democratic way of life. In short, the industrial arts program must help them to become assimilated into their society.

4. Industrial conflict frequently affects the entire society.

5. The prevention of open conflict has received much attention and has necessitated some governmental regulation.

6. Collective bargaining is a compromise form of accommodation.

7. Conciliation and arbitration of industrial conflicts permit accommodation and allow both sides to maintain self-respect.

Modern society is highly integrated through specialization and division of labor. A disturbance in one segment, therefore, disrupts the whole. In an industrial society, many members depend upon the goods, services, and wages of each industry. The goods or services may be imperative to the smooth functioning of the economy; they may be products which society consumes daily. Industrial conflict, therefore, may be crippling to the well-being of society. Because of interdependency in the society, much attention has been given to the prevention of conflict. Labor and management are ordered by law to bargain in good faith. Labor contracts are negotiated through the system of collective bargaining. Teams of negotiators from both sides compose a working agreement which each side will accept and abide by for a specified period of time. If collective bargaining proves fruitless, conciliation or arbitration may be used.

In taking the advice of a conciliator or in abiding by the decision of an arbitrator, both sides maintain their self-respect. Internal labor problems are handled in a similar manner. A grievance procedure typically provides for negotiating at successively higher levels of management and labor until a settlement is reached. Many contracts provide for arbitration if agreement cannot be reached through negotiations. Labor relations must be studied in the industrial arts program. The program must foster an understanding of the interrelatedness of an industrial society and the devastating effects of conflicts in industry. It must help students to understand the nature of conflict[1] and ways of preventing it. Most governmental legislation has been based on the idea that the presentation of the facts in itself will bring about an understanding and a solution. Unless both sides can share one another's experiences and values, genuine understanding is unlikely. The industrial arts program must help young people to understand the various industrial procedures for reaching accommodations and the strengths and limitations of each form.

8. Industrial organizations usually provide a procedure for settling disputes while a contract is in force.

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[1] Cf. supra, pp. 281-83.

9. Ethnic groups are usually more highly assimilated in industry than in the society outside the work plant.

Progress in social adjustment in industry has been slow. All too often, labor and management spend the majority of their energies in justifying their separate positions rather than in trying to understand the opponent's point of view. Contracts frequently do provide a grievance procedure which helps to decrease large scale conflicts. Racial and other ethnic groups are relatively well adjusted in industry; that is, they are more highly assimilated in the industrial society than they are in the larger community. Ethnic groups are not highly segregated in the work plant in the lower status occupations, but relatively few are employed in occupations of high social and economic status.[1] Although progress has been slow, industry has helped ethnic groups become assimilated. It has provided the necessary interaction which tends to develop similar patterns of thought and values.[2] The industrial arts program must help students to see the progress in social adjustment which has been made in industry. It must foster an understanding of industry

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[1] Cf. supra, pp. 67-70, 247.

[2] Cf. supra, pp. 213-14.

as a society in which the processes of accommodation and assimilation function.

Because accommodation is merely a working agreement, because conflict may be detrimental to society, because assimilation is an integrating process, and because industry has been a leading agent for assimilation of ethnic groups, the industrial arts program must help students to understand industrial values, ideas, folkways, and mores. Because industrial conflict affects the entire society, because of the attention given to the prevention of conflict, because collective bargaining is the principal means of negotiating in industry, and because conciliation and arbitration are more forceful ways of reaching accommodations, the industrial arts program must help students to understand industrial procedures for accommodation and to understand the strengths and limitations of each. It must help them to understand the necessity for each side to know more than the facts, to attempt to share one another's experiences and values. Because governmental regulation does exist, because industries do provide for settlement of grievances between contracts, and because industry has been a leading agent for assimilation, industrial arts education must help students to understand the trends and accomplishments in social adjustment within the social institution known as industry.

CHAPTER XI

SOCIAL MOBILITY

The movement of individuals or of cultural objects from one social group to another is known as social mobility. If the movement applies to a shift within a social class, the mobility is called horizontal. Vertical mobility refers to the movement of persons or cultural objects up or down the hierarchical arrangement of society. Territorial mobility, the movement through physical space, contributes to social mobility but is not a part of it. Social mobility is the movement of individuals and cultural objects through social space only.

General Aspects of Social Mobility

The study of social mobility consists of examining the circulation of persons and cultural objects through social space and determining the factors involved in entering and leaving social groups. What is meant by the movement of cultural objects may become more precise through a few examples. Printing by the use of movable type, a

cultural invention, was immediately seen to be superior to hand scripting and moved rapidly from its birthplace in the German culture to all of the civilized world. Similarly, electric lights, television, and jet-propelled aircraft have moved and become part of other cultures. The circulation of persons and cultural objects through social space occurs in patterns. The general pattern of vertical or horizontal mobility has been mentioned already, but each of these has avenues along which the mobility occurs. Each has a series of forces which cause the mobility.

Vertical Mobility

Vertical mobility is of two main varieties, according to the direction of movement. Social climbing or ascending is the movement from one status position to another of higher rank. Conversely, social sinking or descending is the movement from one status position to another of lower rank. The upward flow of social climbing may occur (1) by the infiltration of individuals from lower levels into higher social strata or (2) by the movement of an entire group from a low position to a higher place along the social hierarchy. Similarly, social sinking may occur (1) by the downward flow of individuals from the various social strata to positions in

lower strata or (2) by the sinking of social groups into lower social strata.[1]

Examples of individuals who move from one stratum to another are common and well known. The boy in the slums who wins a scholarship and becomes an engineer or the daughter of a large corporation president who marries a mechanic are typical of individuals moving up and down the social ladder. The vertical circulation of individuals will become more explicit through a discussion of the avenues of vertical mobility; at the present time, however, the rise and fall of social groups must be considered more carefully.

The history of two groups will serve to illustrate vertical mobility of groups. The Christian clergy occupied the highest ranks of medieval society. The Pope occupied the position of highest esteem and power. Bishops, archbishops, and priests maintained elevated positions in society. As the philosophies of realism and empiricism developed along with the growth of scientific knowledge, the Christian church began to decrease in authority. The work of Francis Bacon and Charles Darwin contributed in no small measure to the development of intellectualism in Christianity. During

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[1]Pitirim Sorokin, Social Mobility (New York: Harper and Brothers, 1927), pp. 133-34.

colonial times, most American provinces were subjugated to the authority of the Christian clergy. After the separation of church and state, as championed by William Penn and others, the clergy was stripped of much of its social power. Although the clergy is held in high esteem today, it does not occupy the social position it once held. The elementary school teachers of today represent a group which has advanced in social position since colonial times in America. In the colonial period, education was sought so that the people could read the Bible and learn the wishes of God. Higher education was thought necessary only for the clergy. Consequently, anyone who could read and write was considered capable of teaching the young. Indentured servants and slaves who could read and write were used frequently as teachers. The old dame schools were run by housewives and spinsters who had little education. Today the elementary school teacher is a member of a highly skilled profession, and his social position has risen to a level which is above average. The position still seems to be progressing as the degree of required psychological, biological, and technical training increases. As a group rises or sinks in social status, the members of the group change their social status correspondingly.

Avenues of Vertical Mobility.--Vertical mobility is accomplished in some degree by all societies. In some societies, movement up and down the social ladder is negligible, but even the most caste-like societies do exhibit rare examples of vertical movement. Vertical mobility must have avenues along which people and cultural items move from one level to another.

Various social institutions serve as the avenues along which vertical mobility occurs. At different times and places, the importance of the various social avenues fluctuates. Some of the institutions which serve as avenues of mobility are school, military, church, and political, economic, and professional organizations.[1]

The school system always has been an avenue along which vertical movement has occurred. In societies such as the United States, the avenue provided by institutions of learning starts at the bottom level and progresses to the very top. In other societies, such as those in Western Europe, the avenue may start, not at the lower levels, but rather at the middle, and extend to the upper levels. Perhaps it would be more realistic to think of two avenues, one serving the lower levels and one serving the upper levels.

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[1] Ibid., p. 164.

In the United States, the opportunities to secure a higher education have become progressively greater. Not everyone has the capacity to profit from higher education, nor does everyone have the motivating drive to take advantage of it. Those who have made use of the educational channel have been able to move substantially along the hierarchical arrangement of society. In a study by Warner and Abegglen, it was found that 8 out of 10 of the top business leaders of today attended college and 6 out of 10 were graduated. Of these same business leaders, only 37 percent had fathers who were major executives, owners of large businesses, or professional persons.[1]

In many European countries, the school serves as a dual ladder for movement. The lower social classes have access to a basic education and sometimes to a skilled trade education. Some of the lower classes who are extremely talented are allowed to go on to college preparatory work and then to higher education. The children from the upper classes, however, find higher secondary and college education much more accessible. The avenue in these countries is not as wide and as easily traveled as it is in the United

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[1]W. Lloyd Warner and James C. Abegglen, Big Business Leaders in America (New York: Harper and Brothers, 1955), pp. 33-47.

States, but it does exist. Most Western countries, including the United States, manifest great faith in the college graduate. Sorokin indicates the handicap and the advantage of higher education.

> Without university or college graduation, an individual cannot factually (in some European countries even juridically) be appointed or obtain any prominent place among the high ranks of government or of many other fields; and contrariwise, a graduate with a brilliant university record is easily promoted and given a responsible position, regardless of his origin and family. Many fields of social activity (especially professions) are practically closed to a man who does not have a corresponding diploma; a graduate is often paid better than a non-graduate at the same position.[1]

For a long time, education has been recognized as an avenue which promotes social climbing. Democratic nations use education to try to find the capable persons from all levels. Although not completely open, the educational systems in these nations are usually accessible to all classes. In autocratic nations, educational systems usually are used to sustain the ruling group.

The military services are particularly important in a time of external or internal strife. Many of the Presidents of the United States have been military men. George Washington was drafted as the first President because of his

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[1]Sorokin, op. cit., p. 170.

military fame. Some other Presidents who served in the military are Grant, Jackson, Theodore Roosevelt, Truman, and Eisenhower.

History has shown that leadership won by a person born of low status is likely to continue to grow if the person is talented. Once the power is obtained, it is often exploited. Frequently men have used the power acquired as military officers to become generals, dukes, dictators, and kings. Many rulers have been replaced by military men who rose to positions of great power. Of the 92 Roman Emperors, at least 36 rose to power from the lowest social stratum by the military ladder. Napoleon climbed from humble origin to rule the great French Empire.[1]

The church, especially in periods of expansion, serves as an avenue of vertical social mobility. The church was the only source of higher education in medieval and even in American colonial times. As a rule the church helps a sincere youngster of low status who wishes to secure an education for church work. The movement up and down through the church does not precipitate social currents as it once did. Not only were serfs, peasants, and artisans moved to positions of great power during the Middle Ages, but a

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[1] Ibid., pp. 165-66.

reverse current was also promoted by the church. Thousands of persons labeled as "heretics," "pagans," and "criminals" by the church were degraded, tortured, ruined, or exiled. Many of the degraded persons were kings, lords, princes, and others with high social rank.[1]

Political groups have served as avenues of vertical social mobility. Persons have been able to enter positions of high authority and esteem through political associations. From the time of Augustus in Rome and all through the Middle Ages, history reveals the rise of personal serfs of various rulers to positions of power by becoming engaged in governmental functions.[2] Many congressmen or statesmen have risen to their present positions by participating in the political organizations at lower levels. Most governors were first city councilmen, mayors, district attorneys, or in some other lower positions which allowed them to become known.

Power and high social status as well as wealth accrue to the owners and managers of economic organizations. Great wealth places a person in the upper levels of American society. In the study of Jonesville, Warner and his associates found wealth to be a strong factor in class

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[1] Ibid., p. 168.

[2] Ibid., p. 172.

distinction.[1] Earned wealth does not confer as high a status as inherited wealth. Seldom can an individual move into the uppermost bracket by earned wealth, but his offspring can make the transition readily. The successful business executive may move easily up the social ladder through the economic ladder. As wealth grows, the individual's ability to belong to social organizations expands and he enhances his position in the social world.

Professional organizations have been relatively open to all who exhibit the ability to participate in their activities. Scientists, scholars, lawyers, physicians, dancers, and singers have moved from lower strata to higher positions through professional organizations. Although in many cases education plays a large part in the social climbing, a person frequently would remain obscure if it were not for the professional organizations.

One professional organization with great power to raise and lower the social position of individuals is the press. Publicity is necessary to rapid social promotion. Persons who are climbing through the medium of a profession contribute widely to journals and even to newspapers. Newspapers are particularly powerful. It is not uncommon for an

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[1] W. Lloyd Warner et al., Democracy in Jonesville (New York: Harper and Brothers, 1949), Chapter 3.

unknown to rise to great financial and social position because of newspaper publicity. In like manner, the newspaper can ruin a man of great stature. Hence, the printed word plays a great part in vertical social mobility.[1]

Causes of Vertical Mobility.--Although the causes of vertical social mobility are manifold, three seem to be basic. (1) Differential fertility among the social classes creates a void in the upper classes. The vacuum created is filled by persons who must move from the lower strata. (2) Biological variation between parents and their offspring accounts for much of the vertical mobility. Some children are endowed with greater ability than their parents and can move to positions higher than that of their parents. Others are more limited than their parents and cannot maintain positions corresponding to those occupied by their parents. (3) Changes in the cultural base or man-made environment cause corresponding adjustments by the persons affected.[2] The growth of the population, war, strikes, or revolution may bring about rapid and violent mobility. Cultural changes such as the invention of the telephone, television, or automobile have helped individuals to climb or to sink in more

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[1]Sorokin, op. cit., p. 175.

[2]T. Lynn Smith, The Sociology of Rural Life (New York: Harper and Brothers, 1953), p. 577.

subtle ways. Certainly the automobile was responsible for the rise of Henry Ford; it was also responsible for the development of many a salesman and truck company owner. On the other hand, the development of television has served to degrade some individuals who enjoyed a high reputation by virtue of radio.

Horizontal Mobility

There is an infinite variety of horizontal mobility. Millions of individuals are moving from group to group without a noticeable change in class status. Horizontal mobility may occur in two principal ways: (1) individuals may move from one social group to another on the same level and (2) cultural objects or traits may spread from one social group to another on the same level of society.

Avenues of Horizontal Mobility.--Although horizontal mobility may progress along many avenues, a few have been outstanding. The shifting of persons from occupation to occupation, the shifting of citizenship, the shifting of religious affiliation, and the territorial shifting of persons and social objects are among the most familiar ways of moving horizontally.[1]

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[1] Ibid., pp. 381-409.

Occupational mobility has been studied extensively. Much of the study has been of the vertical type only; however, considerable attention has been given to labor movement with no change in social class. Occupational mobility will be discussed later in the chapter under mobility and industry.

The shifting of citizenship is highly related to migration. People who migrate from country to country, state to state, or city to city may change their citizenship without changing social status. Frequently a vertical mobility also occurs, but for the most part these persons are principally changing allegiance and place of voting. The horizontal shifting of primary groups precipitates boundary disputes and shifting of county and city lines. Territorial shifting of concepts is another corollary of the shifting of citizenship. Along with the people go their ideas and thinking power. Ideologies of government, fads, and beliefs go with the people as they move from place to place or from occupation to occupation.

Another indication of the high mobility of the United States is the constant shift from one religious body to another. As people move territorially, as philosophical perspectives change, or as one religious sect becomes more attractive, shifts in membership occur.

Mobility and Industry

Mobility in industry is far from being a well-defined phenomenon. What is meant by mobility? Researchers in the field have used mobility in three distinctly different ways.

Some researchers prefer to measure the ability of workers to move from job to job, into and out of employment, or into and out of the labor force. This measurement is concerned with the aptitudes of workers--their ability to do other tasks and to occupy other positions than the ones in which they are employed. The study of the ability to move requires a detailed knowledge of the skill requirements of the various jobs of industry, as well as a knowledge of the human ability to transfer skills. Although the idea of such a measure is desirable, its limitations have prohibited any real progress to date.

Other researchers prefer to measure the propensity of workers to move from job to job, into and out of employment, or into and out of the labor force. This measurement must include not only a person's ability to change but his willingness as well. For example, a turret lathe operator may be willing to be the corporation's president, but he probably does not have the ability. Furthermore, propensity to move is, in some respects, immeasurable; an inclination

to move is meaningful only in specific situations. The measurement of propensity, like the measurement of ability, is desired but little used by students of mobility in industry.

Practically all studies have resorted to the measurement of actual shifts in the industrial population.[1] Admittedly these do not measure all the facets of mobility. However, with available data of actual movement, the concept of labor mobility can be well illustrated.

Concept of Labor Mobility

Labor is an economic commodity which adjusts to the short-run supply and demand of the market. Workers are distributed and redistributed among the firms, industries, occupations, or localities as the demand dictates. Market demands may cause fluctuations in the size of the labor force and in the volume of employment and unemployment. Labor mobility is the movement into, out of, or within the labor force.[2]

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[1]For a thorough discussion of the three types of mobility measurements and examples of studies which discuss them, see Herbert S. Parnes, Research on Labor Mobility (New York: Social Science Research Council, 1954), pp. 13-22.

[2]The labor force includes all persons who report that they have actually worked during a specified period of time (the week preceding the census). It also includes those who were unemployed but were seeking work during the specified

Labor mobility, being a type of social mobility, also occurs in two directions, vertically and horizontally. Labor mobility, however, whether vertical or horizontal, may occur in seven distinct ways. (1) Interfirm movement is the movement from one firm or company to another. (2) Occupational movement is the movement from one occupation to another. The ability to deal with occupational movement precludes a system of well defined occupations.[1] (3) Movement from one industry to another also is affected by the classification system used. In most studies, the Standard Industrial Classification Manual or an adaptation of it has been

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time. The work of unpaid family members working less than 15 hours per week on farms or in family-owned businesses, of housewives, or of persons under 14 years of age is not included in the labor force. Work done in prisons or on penal farms, or work done in homes for aged, blind, and the like is not included in the labor force. For more detailed description of the labor force see Louis J. Ducoff and Margaret J. Hagood, Labor Force Definition and Measurement, Bulletin 56 (New York: Social Science Research Council, 1947).

[1]Two detailed lists are used extensively: U. S. Bureau of the Census, 1950 Census of Population: Alphabetical Index of Occupations and Industries lists approximately 18,000 occupational titles; U. S. Bureau of Employment Security, Division of Occupational Analysis, Dictionary of Occupational Titles (1950) lists more than 21,000. Each of the publications groups the occupations into major occupational divisions. The seven or eleven major occupational groups seem excessively broad for detailed comparison of data.

used.[1] (4) Geographic movement is the movement from one local area to another. Geographic mobility may be measured by changes in the location of jobs or by changes in the place of residence. (5) Movement from an unemployed to an employed status and (6) movement from an employed to an unemployed status assume that the worker desires employment. When a worker no longer desires work he is not unemployed but leaves the labor force. (7) The movement in and out of the labor force is the final way in which labor mobility may be measured.[2]

The seven ways of measuring mobility are by no means discrete classes. A person may quit his unskilled job (type 6) and remain unemployed for a period before accepting a job (type 5) in another state (type 4) as a drill press operator (type 2) for a different company (type 1) in a different industry (type 3). Thus, it is possible for one move to embody many of the ways of measuring labor mobility. To understand the vertical and horizontal mobility of the industrial world, all ways are used.

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[1]U. S. Bureau of the Budget, Division of Statistical Standards, Standard Industrial Classification Manual (1945).

[2]For a detailed discussion of the seven forms of labor mobility see Parnes, op. cit., pp. 24-35.

Vertical Mobility

Vertical mobility may be measured to some extent by each of the foregoing measures. However, an additional method is used extensively to measure vertical mobility. It presupposes that the status bestowed upon the offspring is that of the parents. A child reared in a lower class home naturally starts in the lower class. Thus, the change in occupational status from one generation to the next is a frequent measure of vertical occupational mobility.

In a study by Rogoff, the change in occupational status from father to son was made for two periods thirty years apart.[1] The first period was about 1910 and the second period about 1940. The information was gathered from marriage license applications for Indianapolis, Indiana, and the surrounding area. By this method, Rogoff was able to secure from one metropolitan area over a 30-year span information which was not grossly affected by territorial mobility. The study found that in both 1910 and 1940, the most likely occupational destination of each son was the occupation of his father. This was true of all groups, whether the occupation was economically or socially rewarding or not. The

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[1]Natalie Rogoff, Recent Trends in Occupational Mobility (Glencoe: The Free Press, 1953).

frequency of other choices depended on the father's occupation. The son of the white collar worker (professional, proprietor, salesman, or clerk) was most likely to be in another white collar position if not in the same occupation as the father. If the fathers were not in the white collar group, the sons were most likely to be manual or service workers. The average mobility did not change in Indianapolis in the 30-year period. The professional and semi-professional classes were not as accessible to sons from other classes as were the other occupational classes. Clerical, skilled, and semi-skilled work all were relatively open or free to sons of other groups. Downward mobility from white collar to blue collar was less frequent in 1940 than in 1910. Upward mobility was about the same in both periods.

Davidson and Anderson studied the male working population of San Jose, California.[1] Each person in the sample supplied the occupation of his father and grandfather. The occupational status of the grandfather, and frequently the father, had not been established in the community of San Jose. Davidson and Anderson point out the inaccuracy

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[1] P. E. Davidson and H. Dewey Anderson, Occupational Mobility in an American Community (Stanford University: Stanford University Press, 1937).

involved in using two successive generations to denote change in mobility. The dynamic nature of American industry has forced many occupations of the grandfathers into obsolescence and has created many occupations of the grandsons which are not comparable to the occupations of the grandfathers. The study showed that about 70 percent of each set of sons were in occupations different from those of their fathers. Most members of the work force experienced a period of floundering. Many short-period jobs were held by most of the respondents. Manual labor, farming, selling, and messenger service were accountable for most of the short-period jobs. The study found that all persons had an average of three permanent occupations. It seems from the data that upward mobility from a floundering period to a final permanent occupation is a general pattern for the men of San Jose.

Lipset and Bendix made a study of men over 31 years of age in the Oakland, California area.[1] The study corroborates the findings of Davidson and Anderson in that each respondent experienced a variety of jobs. It is possible that the father-son method of study may select a

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[1]Seymour M. Lipset and Reinhard Bendix, "Social Mobility and Occupational Career Patterns 11. Social Mobility," Class Status and Power (Glencoe: The Free Press, 1953), pp. 454-64.

person who is still in the floundering state and is only temporarily in the socio-economic category of his present occupation. The study shows that nonmanual workers are likely to have some experience as manual workers; manual workers have little experience as nonmanual workers. The largest group is composed of those manual workers who become self-employed. The status of self-employed workers is one of the few higher ranking statuses which seem freely open to manual workers. The study found, as did Rogoff's, that there is more homogeneity in the top social structure than at the bottom.

Warner and Abegglen made a study of the business elite in the United States.[1] The study revealed the origins of business leaders for 1900, 1920, 1930, and 1950, thus giving trends over a 50-year period. The farm population has supplied an ever-decreasing percentage of the leaders. The number has remained about the same, but the diminishing proportion of farmers in the total population accounts for the constant proportional decline in business leadership. The proportion of leaders supplied by the white collar workers has increased steadily. Over the 50-year period,

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[1]W. Lloyd Warner and James C. Abegglen, Occupational Mobility in American Business and Industry (Minneapolis: The University of Minnesota Press, 1955).

white collar workers, laborers, and professional men have supplied increasing proportions of the business elite. Owners of businesses and farmers have supplied decreasing proportions. Businessmen and professionals still supply three to five times their proportionate share if all classes supplied leaders in relation to the over-all size of each class. The comprehensive view of the study indicates that mobility into the business elite from the lower strata of society is increasing.

Although handicapped by lack of proper data, by lack of established research method, and by inadequately defined nomenclature, the few studies which have examined vertical mobility in the labor force are very much in agreement. All seem to indicate a profuse movement up and down the social ladder, indicating that the industrial system of the United States is as open as it ever has been, perhaps more so. Persons who start at the very top have a strong tendency to remain there. Those who start near the bottom exhibit some mobility, most of it in the upward direction, but not usually too far. The middle class groups move further than other groups, and they move in an upward direction more than downward.

Horizontal Mobility

Horizontal mobility in industry is more prevalent among the workers of the lower occupational strata. In many cases, the floater or drifter is pathologically mobile; to a great degree, however, much of the horizontal shifting of personnel is caused by the nature of mass production and the bureaucratic structure of industry. Differentials in formal education and training contribute to the horizontal movement.[1]

The pathological drifter moves from job to job under pressure of his own restlessness and anxieties. Frequently he is a migrant who has not established social roots anywhere. Often he is an alcoholic. The skid rows and transient shelters are heavily occupied by middle class men who have not had permanent addresses or definite jobs since their youth.

The problem of job classification makes it difficult to measure horizontal mobility. The 21,000 occupations listed in the Dictionary of Occupational Titles cannot be considered as that many discrete and unrelated work positions.

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[1]This discussion of horizontal mobility is based on Theodore Caplow, The Sociology of Work (Minneapolis: University of Minnesota Press, 1954), pp. 82-88.

Would a drill press operator who became a plain milling machine operator be moving horizontally or vertically? He still is doing machinist work, but he probably is getting more pay and the new position requires more skill.

A pattern of horizontal mobility may be illustrated by the person who learns a particular trade or skill so that he can return to it when other alternatives are lacking. Such a person frequently learns the occupation of his father but prefers not to work in it unless it becomes necessary. Still others find that the broad fringe of white collar jobs, such as salesman, small enterpriser, or dealer, serves to help them escape from marginal positions. Such positions act as stimuli to both vertical and horizontal mobility.

Horizontal occupational mobility is more prevalent among unskilled and semiskilled workers than among workers of higher occupational status. Professional and managerial positions demand a high level of education and a heavy investment in preparation. A large corporation also has a great investment in the specific training of professional or managerial personnel. As an example, Whyte reports that General Electric Company spends at least two years providing additional training for college graduate engineers.[1] Because

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[1]William H. Whyte, Jr., The Organization Man (Garden City: Doubleday and Company, 1956), pp. 132-39.

of the extensive investment in time, education, and money, the men in professional and managerial positions are less likely to make a shift.

Semiskilled and unskilled workers frequently are beset with the frustrating feeling of being expendable. Most semiskilled workers are required to have a high level of general education; in most cases a high school diploma is necessary. However, the specific job training may be very slight--in many cases only a few days. Most unskilled laborers need little or no specific training. Workers on the lower occupational rungs may have little pride in their work, which is often repetitive and totally lacking in rational requirements. The massiveness of the organization precludes the development of strong ties between workers and management. The lack of the feeling of importance, of specific training, and of personal ties serves to encourage a high rate of horizontal mobility among the unskilled and semiskilled workers.

Selectivity of Mobile Workers

Characteristics of mobility which have not been specifically mentioned are age, sex, race, and marital status.

Age.--The mobility decline with an increase in age seems to be a well established process. All types of mobility

are less for the older person in the labor force. There seems to be an inverse relationship between age and labor mobility, so that mobility becomes progressively lower as a person grows older. The high mobility of younger workers may be due to part-time and temporary jobs while in school. The floundering period or period of adjustment during the early years of employment undoubtedly accounts for much of the high mobility of youth.

Since age and length of service are clearly related, security and seniority reflect differentials in mobility. Length of service increases the worker's job rights, seniority rating, and tenure. Most likely a move in later years would require starting at a lower salary and the loss of rights, seniority, and tenure of office. The old timer on the job establishes an intangible satisfaction, a prestige. The prestige conferred upon him greatly affects the willingness of the aged worker to move to another position.[1]

Sex.--The mobility of men and women does differ. Women make many more changes in labor force status than men. Even though men outnumber women two to one in the labor force, the number of women who enter and leave the labor

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[1]This discussion of age and mobility is based on Parnes, op. cit., pp. 102-109.

force each month is considerably higher than the corresponding number of men. Men make relatively more shifts in occupation, industry, and employer; women make more shifts in and out of the labor force and shifts of industry and employer with no occupation shift. Layoffs cause men and women to leave the labor force at about the same rate. Women make more voluntary departures than men.[1]

Race.--There have been only a few studies of the mobility differential caused by racial differences. In the study by Rogoff, it was found that the Negro worked primarily in the unskilled or service class. Negroes were about five times more likely to enter these two classes, but they did not enter any other class at a rate as high as whites. Regardless of their fathers' occupations, Negroes were most likely to become laborers.[2] The studies reviewed by Parnes indicated a high mobility among Negroes. The movements were mostly of the horizontal type.[3]

Marital Status.--Although one would expect the mobility of married men to be much less than that of single men, studies have not shown a great difference. Married men

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[1] Ibid., pp. 109-16.

[2] Rogoff, op. cit., p. 108.

[3] Parnes, op. cit., pp. 116-18.

with families have tended to be somewhat more stable, but much of the stability could be due to age differential.

Social Mobility and the Industrial Arts Program

The social movements of the population reveal many significant features which have implications for the industrial arts program. The nine points listed below have been drawn from the foregoing analysis.

1. Vertical mobility is the movement of individuals, groups, or cultural items up or down in the hierarchical arrangement of society.

2. The upper classes do not have sufficiently high rates of fertility to replace themselves.

3. Vertical mobility may be caused by biological variations within a family.

4. Changes in the cultural base may cause vertical mobility.

All societies have a hierarchical arrangement of their members. In the United States the hierarchy is dynamic; some people are moving up the social ladder while others are moving down. An operative open-class system based upon functional barriers to mobility is the American Dream. According to his ability, a person would move up or down the social scale.

The Dream has been based primarily on upward mobility. People dream of the opportunity to "get ahead" and to become rich and powerful. Because of a rising level of living caused by changes in the cultural base of the society, new ideas and inventions of material items have expanded greatly the culture of society. The level of living rises as a broader culture becomes available to all levels of the society. Although the general trend is upward, changes in the cultural base also cause downward mobility. Certainly, the development of the diesel engine has caused a degrading of many persons whose livelihood depended upon coal and the steam locomotive. The general trend in upward mobility is aided also by the low fertility rates in the upper classes of society.[1] The low rates would cause the upper middle and upper classes to become smaller if replacements did not move up from lower classes. Another important cause of vertical mobility is biological variation within a family. A child may have greater or more limited capacities than his parents; he may not be capable of maintaining the level of living in which he was born or he may be capable of rising above it. A person's capabilities are developed by education. Education must continue to serve youth by developing them to their

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[1] Cf. supra, p. 104.

fullest capacities. It must help them prepare for occupations commensurate with their abilities. Occupation is one of the most important factors contributing to the social status of a person. The industrial arts program must help young people to discover their abilities and to become familiar with occupations compatible with their abilities. It must foster an understanding of industrial changes in the culture and of their effects upon social status.

5. The family is responsible for the initial social status bestowed upon an individual.

6. Education is the most important avenue of vertical mobility.

7. Negroes and other ethnic groups are likely to be barred from rising above levels of menial work.

An individual begins life with a status bestowed upon him through his family's socio-economic status. If he has ability, he may rise above the status of his family; if he lacks ability, he may sink socially. There is a high tendency for people to remain in the status in which they were born. However, the class system in America is as open as ever and some of the recent studies indicate that the system is becoming more functional; that is, the arbitrary placement of individuals into the various levels of society seems to be decreasing and placement based upon individual

achievement seems to be increasing.[1] Americans have great faith in education. They look to formal education to develop the individual so that he can occupy a position commensurate with his ability. The schools must continue to serve the functional aspects of social mobility. Arbitrarily imposed barriers to mobility still are imposed by society.[2] Negroes and other ethnic groups are confined primarily to menial work. The industrial arts program must help students to see the necessity for eliminating arbitrarily imposed barriers. Much of the technical culture can be expanded to replace those individuals confined to menial and routine work. Society is being deprived of the fullest contributions of many individuals because of arbitrary social placement. The industrial arts program must help all students to understand industry's role in creating a functional system--to understand the cultural development, the technical education, and the eradication of discriminatory status placements necessary to a functional system.

8. Young adults comprise the most highly mobile group.

9. Massive industrial organization tends to encourage horizontal mobility among the lower classes of occupations and

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[1] Cf. supra, pp. 224-26, 247-48.

[2] Ibid.

stability among the upper classes.

Age differentials in mobility are quite pronounced. In early adulthood people tend to concentrate their efforts toward gaining status. Education is frequently obtained through self-denial and sacrifice. Many young adults energetically produce beyond the requirements of the position in order to gain recognition and status. Older workers are more settled. They usually have gained a certain amount of status and security. They feel they have too much to lose to start from the beginning at another work plant; seniority and retirement benefits which have accrued are not transferable from one industry to another. Young adults also are territorially mobile.[1] They are more willing to move greater distances if they perceive opportunities for advancement. Lower classes of workers feel little security in large industrial corporations. They feel that they are expendable. Specific job training is short for semi-skilled workers and unskilled workers receive little or no training. Because of a feeling of unimportance and lack of extended specific training, lower class workers tend to move frequently within the same social and occupational level. The industrial arts program must help students to understand the social conditions

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[1]cf. supra, pp. 141-43.

underlying the mobility of young adults. It must help them to evaluate the rationale basic to both vertical and horizontal mobility of young adult workers. The industrial arts program, by fostering an understanding of the total industrial organization, can help students to evaluate rationally the security and advancement opportunities of industry.

Because vertical mobility may be up or down the hierarchical arrangement of society, because it may be caused by low fertility rates in the upper classes, because it may result from biological variations, and because changes in the culture may cause mobility, the industrial arts program must foster an understanding of these basic causes of mobility and the role of industry in the functioning of each. Because people can move from the status level originally granted by the family, because education is one important avenue of mobility, and because discrimination and other arbitrary barriers impede mobility, the industrial arts program must help students to develop their skills and abilities to a level commensurate with their capacities. Because young adults are highly mobile, because lower class workers are highly mobile, and because people in upper class occupations are relatively stable, the industrial arts program must help students to understand the social conditions underlying mobility and to understand the total groupness and interdependency of all industrial personnel.

CHAPTER XII

FAMILY LIFE

The family is the fundamental social group. Within the family group, the long task of the socialization of the young is begun. The family in which a person is reared influences his nature and behavior throughout his life. Relatively few years of a person's life are spent outside the intimate relationships of a family.

The Structure and Function of the Family

The family is the durable union of husband and wife, with or without children, or of a man or woman alone with children.[1] The primary family group is composed of the married couple and their offspring. Sex and parental functions are morally relegated to the family. Although other functions may vary considerably, sex and parenthood are universally accepted as functions of the family.

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[1] William F. Ogburn and Meyer F. Nimkoff, Sociology (Boston: Houghton Mifflin Company, 1950), p. 463.

The family may include parents of the married couple on one or both sides. In some cases, married children and grandchildren may live as a social unit. Though the structure of the family may vary considerably, it is regulated by the culture. Likewise the functions of the family are determined by the culture.

Marriage

Whether by preference or by necessity, most marriages consist of one husband and one wife. Monogamy is more widely practiced than any other form of marriage. Western societies, which have contributed in great numbers to the population of the United States, have had a long and unbroken tradition of monogamous marriages. Monogamy is deeply seated in the American culture.[1] It is the only socially sanctioned form of marriage in the United States. As Truxal and Merrill have observed, "The norm of lifelong monogamy remains the socially accepted condition of marriage, even though the rising divorce rate has resulted, for a considerable majority, in a kind of successive polygyny or polyandry."[2]

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[1] Ibid., pp. 466-67.

[2] Andrew G. Truxal and Francis E. Merrill, Marriage and the Family in American Culture (New York: Prentice-Hall, Inc., 1953), p. 9.

The selection of a mate from within the group is known as endogamy and selection from outside the group is exogamy. In American society both forms are found. Marriages within the family group are forbidden; most states do not allow the marriage of first cousins. Thus, marriage is exogamous. State laws, on the other hand, may prohibit marriages of mixed races. Church groups encourage young adults to marry within the group. Ethnic groups may encourage marriage among their own national group. Marriage is therefore endogamous as well as exogamous.[1]

The selection of a mate in the American culture is strongly influenced by romantic love. The church may have a decided influence on the person contemplating marriage. The family origin of the proposed mate is quite important to many persons. The financial status of one or both of the persons frequently influences the decision to marry. The social status of a person determines, to a great extent, the people he meets and the interests he shares. A person's vocation may determine his residence and opportunity to meet young persons of the opposite sex. In various direct and subtle ways the individual's selection of a spouse is

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[1]Cf. Meyer F. Nimkoff, Marriage and the Family (Boston: Houghton Mifflin Company, 1947), pp. 37-41.

influenced by society, but society sanctions the free selection based upon affectional bonds.[1]

Marriage is not a necessity for economic reasons as it was in the past. Today it is socially acceptable for a women to work and to remain single if she wishes. However, the fact of social approval has not increased the percentage of single women. On the contrary, the percentage of women 14 years of age and over who remain single has been decreasing steadily. Standardized for age, the percentage of women 14 years old and older who were single in 1890 was 24.3. By 1930 only 23.7 percent were single, 19.6 percent by 1950, and 18.6 percent by 1958.[2]

The young people in the United States are marrying at younger ages than formerly. In 1890 the median age at the time of the first marriage was 26.1 years for men and 22.0 years for women.[3] In 1930 the median age was 24.3 for men and 21.3 for women. In 1950 the median ages for men and women had been reduced to 22.8 and 20.3 years, respectively.

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[1] Ibid., Chapter 12.

[2] U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government printing Office, 1959), p. 38.

[3] Hazel Kyrk, The Family in the American Economy (Chicago: The Universityoof Chicago Press, 1953), p. 20.

In 1958 the median ages were 22.4 and 20.2 years, respectively. Both men and women are marrying younger than formerly, but men still do not marry at as early an age as women.[1] This fact reflects the age differential sanctioned by American society.

Family Organization

The conjugal family is the most common form of family life in the world. It is organized around the nucleus of husband, wife, and offspring. Each family is independent of other similar organizations. If additional persons are living within the household, the larger unit is differentiated from the smaller biological family. Strong affectional bonds are generated by the conjugal family. The family is formed by marriage and dissolved by death, desertion, or divorce. In this respect, the conjugal family has a serious disadvantage. Continuity and economic efficiency are lessened by the disruption of one unit and the beginning of another. Inheritance laws tend to mitigate to some extent the economic disadvantages.[2]

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[1] U. S. Bureau of the Census, op. cit., p. 71.

[2] Ogburn and Nimkoff, op. cit., pp. 464-65.

Very common among primitive peoples is the consanguine family organization, the core of which is the relation of blood kin. The bond between brothers and sisters seems stronger than the bond between mates.[1] With civilization, the consanguine family tended to disappear, and the conjugal family became the predominant type. By the time Western culture was being transplanted into colonial America, most young couples were setting up individual households consisting primarily of the married couple and their progeny. In 1948, 93 percent of all married couples maintained separate households.[2]

Families in the United States today have an infinite variety of characteristics and can be classified in many ways. Mowrer found four categories of families according to the authoritative status: paternal, maternal, equalitarian, and filiocentric. The paternal family was found primarily among ethnic and farm populations. Maternal families were more common in homes in which the father was gone most of the day.[3]

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[1] Ibid., p. 465.

[2] Ibid., p. 469.

[3] Ernest R. Mowrer, The Family (Chicago: University of Chicago Press, 1934), pp. 96-98.

The general characteristics typical of American families in the nineteenth century have changed drastically.[1] The family is not as likely to be paternal as it once was; it tends to be equalitarian, the male still retaining some of his prerogatives. The legal status of women reflects the trend toward sharing familial responsibilities equally. The husband no longer works in or around the home and must rely on his wife for much of the organization of family life. Moreover, the family is less stable than that of the nineteenth century. The divorce rates are higher. Families are constantly moving from place to place. Land and other property are not usually held and transmitted to successive generations. Large families, an economic asset in an agrarian society, may become in an industrial society an economic handicap. In families today, mothers frequently work outside the home, placing much of the responsibility of child care on other persons or institutions. The expense of such care for large families diminishes the real wages of the working mother beyond the point of practicality.

Attitudes of sex have changed considerably. Many of the sex tabus present at the turn of the century no

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[1]Cf. Robert L. Sutherland and Julian L. Woodward, Introductory Sociology (Chicago: J. B. Lippincott Company, 1940), pp. 590-99, and Nimkoff, op. cit., Chapters 3 and 4.

longer exist. Women need not exclude sex from their conversation with family and friends. The wife has the right to make charges of sex cruelty against her husband. On one hand, the freedom from sex tabus has increased divorce and family instability; on the other hand, many married couples may have developed a happier and more stable family life by being able to freely discuss sexual problems.[1] Evidence seems to indicate a sharp increase in premarital and extramarital coitus. In 1940 there were approximately 89,500 illegitimate births in the United States. The number has increased rapidly. By 1950 there were 141,600 and by 1957, 201,700. In the 17-year period, the number of illegitimate increased approximately 120 percent while the number of women 14 years old and older increased only about 20 percent.[2] The number of illegitimate births concealed by married status is unknown.

Premarital coitus is much more prevalent than extramarital relations. Married persons may have extramarital sex interests thwarted by pressing economic and social demands and yet the sex drive does have an outlet within the family. Promiscuity is rarely sanctioned by both husband

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[1] Sutherland and Woodward, op. cit., pp. 595-96.

[2] U. S. Bureau of the Census, op. cit., pp. 38, 56.

and wife. The social effect upon the children in the family is no small deterrent to extramarital sex relations.

The population per household[1] has declined steadily. According to the Bureau of the Census, the population per household in 1890 was reported as 4.93 persons. This figure decreased to 4.34 persons in 1920, 3.77 in 1940, 3.53 in 1950, and 3.44 in 1958.[2] The household is not identical with the family, but includes all the persons residing together as a unit, regardless of kinship. Thus, the average size family would be slightly smaller than the number of persons per household. The average size family in 1958 was 3.35 persons. In that same year, 43.8 percent of the families had no children, 18.6 percent had one child, 18.8 percent had two children, and 19.5 percent had three or more children.[3] The trend toward smaller families continues.

Family Functions

Changes in the structure of the family are accompanied by corresponding changes in function. The family,

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[1]These figures are not exactly the same as the average number of persons per household because the total population was used and the total population includes members of quasi-households.

[2]U. S. Bureau of the Census, op. cit., p. 40.

[3]Ibid., p. 42.

historically, was a multi-functional unit, dominating the activities of man from the cradle to the grave. The family performed affectional, biological, economic, protective, educational, religious, and status-granting functions. The accident of birth into a family was probably the most significant thing to happen to a person in his lifetime. Today, many of the functions of the family have been transferred, at least in part, to other institutions. Even so, the family continues to play a dominant role in the life of the individual and in the institutional structure of society.[1]

Since the time of the colonial family, the nation has experienced major industrial and technological revolutions, which have produced the inevitable changes in the structure and functions of all social institutions. Changes which occur in one social institution will have their effect upon all others. Hence, the economic, educational, recreational, religious, and protective functions of the family have been especially altered. The affectional, biological, socialization, and status-granting functions have been affected to a lesser degree. The nature of the remaining functions allows the family to continue as the central social institution.[2]

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[1] Truxal and Merrill, op. cit., p. 313.

[2] Ibid.

Economic Functions.--Most families have moved from the dual role of producer and consumer to one of consumer only. In earlier farm families most of their own food, shelter, and clothing was produced by the family group. Vegetables, meat, milk, and cheese were products of the farm. From the wool and cotton, the yarn was spun which eventually was made into cloth and clothing. The early farm family was a self-sufficient unit. In contrast, today's family produces little for its own consumption. The materials or products are produced by experts and sold on the market. Many raw materials are processed several times before reaching the retail market. The production and distribution of economic goods have been removed almost entirely from the modern American home. The productive aspect of the modern family has been shifted to such service establishments as laundries, bakeries, meat packing plants, canneries, and frozen food plants. Textile mills, clothing factories, tanneries, shoe factories, and millinery shops have removed most of the clothing production from the family.[1]

The family has not been stripped completely of its economic function; mainly, it has shifted to a consumer

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[1] Cf. James A. Quinn, Urban Society (New York: American Book Company, 1955), pp. 364-65.

role. As industry took over the productive functions of the family, it expanded them far beyond their former state. The tremendous factories, mills, mines, communication systems, and power plants produce goods which are distributed through a vast system of wholesale and retail stores with the aid of banks, trust funds, and the whole complex of credit and money.[1] The production of automobiles, refrigerators, washing machines, and a host of other items reflects a level of living far beyond that which is possible in a home-industry society.

Education Functions.--In earlier decades the rural nation did not require extensive formal education for its children. The youngsters could learn the ideas and ideals of the culture through daily participation and observation. In contrast, the highly specialized and technical nature of the vast number of vocations in an industrial society requires an extensive system of formal education. The formal education is operated by the government. The system includes general, vocational, and technical education. The schools of today not only teach the three R's but also attempt to help the youngsters through a total development. In the process of such development, the schools also conduct other services

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[1]Nimkoff, op. cit., pp. 93-95.

besides teaching. Lunch programs, health education, physical education, recreation, protective service, and child-caring service are all functions of which the school system has relieved the family, at least in part. In taking over these functions, the school has given the family some new educational functions. Most parents are members of parent-teacher organizations. They serve on school committees and help in many of the activities of the school. At home, parents help students with homework, guide them in course or subject selections, guide them in selection of radio and television programs, and serve as interpreters of school and teacher regulations.[1]

The family's educational responsibilities are still very extensive in the realm of informal education. The formative years from birth until the age of six are the years in which the child learns the foundational aspects of socialization. The basic behavior expected of all girls or all boys is both subtly and directly taught to the child. In these early years of life the foundations of attitudes, behavior, and morals are learned by the child. The socialization and informal education by the family do not stop when a child enters the public schools. Families retain varying amounts

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[1] Ibid., pp. 101-102.

of this function but, in general, starting with the child's entrance into first grade, there is a steady decline in the informal education function of the family. Public education, the church, scouting, and other youth groups gradually assume this function.

Recreation.--The recreational facilities of early rural America were centered about the family and the farm. Group games, reading aloud, playing musical instruments, and group singing were common family activities. Still other activities which combined work with play were the care of pet animals, corn huskings, taffy pulls, and sewing bees. Frequently, one member would read aloud while the rest of the family worked at some common task.[1]

Stimulated by the higher level of living, the additional time for recreation, and the intrinsic value placed on specialization, a proliferation of commercial recreational facilities appeared. Nimkoff cites many forms of recreation which are not centered in the home:

> There are clubs of all kinds, athletic, bridge, fraternal, hobby; there are motion-picture houses, theaters, football stadia, baseball parks, playgrounds, bowling alleys, skating rinks, shooting galleries, dance halls, night clubs, tennis courts, golf links, swimming pools, race tracks, boxing and wrestling rings, and so on in great profusion. The

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[1] Ibid., p. 97.

> proliferation of recreational outlets and their availability on a commercial basis encourage individualization in recreational interests as one of the dominant characteristics of the present-day play pattern.[1]

Each member of the family may have certain recreational activities which are not shared with other members. Although the family has lost much of its earlier recreational function, it has acquired new functions more in keeping with contemporary recreational habits. The family helps select and guide the offspring in proper selection of facilities. Together they may participate in an infinite variety of both commercial and nonprofit activities. The selection of toys and play equipment is no small task for the parents in the families of today. The growth in recent years of a family room as a second living room may be an indication that home recreation is still popular. Television, high fidelity, radios, and record players have encouraged dancing at home, pajama parties, and more home-centered activities. Although the family has lost many recreational functions, it still has a significant role in the play-life of its members.

Protection.--Historically, the family was the central institution for protecting its members. It provided food, shelter, and care; it fought off pestilence and other

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[1] Ibid.

physical harm. Today private insurance agencies, private social agencies, and public welfare and insurance programs have replaced the family in many of the protective functions. Traditionally the infirm and aged were cared for within the home. Today many families cannot provide adequate facilities and care. In a consumption economy, there are few chores for the aged and little they can do to offset the financial burden on the rest of the family.

The government, through the provisions of the Social Security Act of 1935, provides grants to needy aged and an insurance program to help the aged in the future. Most families provide some protection in the form of life insurance. Approximately 80 percent of all families own some life insurance. It is quite likely that those families who own no insurance are also least able to provide for the surviving members of the family in case of death.[1]

Police, fire, health, and safety protection have been transferred in varying degrees to governmental agencies. In metropolitan areas, police protection involves a large force of well trained persons, but in small towns and rural areas a single marshall with the aid of social coercion may maintain law and order. Fire departments in urban areas

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[1]Truxal and Merrill, op. cit., pp. 332-36.

must have well trained full-time employees whereas the occasional fires in rural areas are handled by volunteers. The family does much to develop in youngsters the habits of good health. Large social agencies help with literature, free clinics, school nurses, and home visitations. Safety in the home is still a problem. Home accidents are more frequent than any other type.[1] Safety councils throughout the nation conduct courses in driving and other safety practices, help the schools to develop safety practices, and supply literature to stimulate safety consciousness. Health, fire, and safety agencies inspect public buildings and enterprises for the protection of the public.

The affectional, biological, socialization, and status-granting functions continue to be principal responsibilities of the family. Procreation is necessary in all societies if they are not to perish. In times of economic depression and low birth rates, students of sociology have charged that the family was not accepting its reproductive function.[2] Recently, however, many leaders in the nation have been concerned with the population explosion and have advocated the use of birth control. The family has always

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[1]Cf. U. S. Bureau of the Census, op. cit., p. 69.

[2]Sutherland and Woodward, op. cit., pp. 590-99.

had the major task of shaping the personality and character of the young. Although much of the responsibility for personality development has been transferred, along with other functions, to other social institutions, the family still has shown a deep concern for character development. The chief concern of the family is how well it can provide for the personality and social needs of its members. Great emphasis is placed upon love and affection within the group and their effect on the character of the individual members.

The Negro Family

The Negro population in the United States accounted for 10.0 percent of the total population in 1950. The family life of this significant portion of the total population differs considerably from the family life of the white segment. Table 14 shows the percentages of women of marriageable age according to marital status and color. The data for the nonwhite population represented Negroes almost entirely, because all other nonwhite persons comprised only 0.5 percent of the total population. The nonwhite population had a lower percentage of married women. Although 60.9 percent were married, only 48.8 percent were living with their husbands. The nonwhite women had higher percentages of the widowed and the divorced.

TABLE 14

PERCENT DISTRIBUTION OF WOMEN 14 YEARS OLD AND OVER, BY MARITAL STATUS AND COLOR: 1958[a]

Marital Status	White	Nonwhite
Single	18.6	20.7
Married	66.6	60.9
Husband Present	64.0	48.8
Husband Absent	2.7	12.1
Widowed	12.5	15.7
Divorced	2.3	2.8

[a]Data from U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959), p. 41.

Among the Negro population of the rural South, a family system evolved which was responsive to the environment. Sex mores and ideas on mating were carried over from slavery. Frazier describes the evolution of the mother-dominant family which developed in the rural South and spread as a moral arrangement:

> The family groups originated in the mating of young people who regarded sex relations outside of marriage as normal behavior. When pregnancy resulted, the child was taken into the mother's family group. Generally the family group to which the mother belonged had originated in a similar fashion. During the disorder following slavery a woman after becoming pregnant would assume the responsibility of motherhood. From time to time other children were added to the family group through more or less permanent "marriage" with one or more men. . . .

> From the standpoint of marriage statistics the rural Negro population has shown a large percentage of illegitimacy. But these statistics have little meaning if they are not related to the folkways regarding sex and marriage relations which have grown up in those isolated rural areas. The type of sex and marital relations which have been described does not indicate that sex relations have been promiscuous and free from controls. There has been, in the first place, the general recognition of the obligation of the mother to her children. In fact, pregnancy has been regarded as a phase of the maturing or fulfillment of the function of a woman.[1]

Marriage meant subordination to a man and a different type of life. Frequently a pregnant girl's mother would refuse to allow her to get married. Occasionally a man would bring his offspring to a family group or he would bring in an orphan or the child of a friend. The Negro family became an amorphous group held together by a central mother figure.

Contemporary Negro families still show large numbers of women as heads of households. In 1958 women were listed as heads of households in 22.4 percent of the nonwhite families in comparison with only 8.6 percent of the white.[2] The urban areas now have a higher percentage of women as heads of households than the rural areas where the family type originated. Desertion by the husband and father is frequent

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[1]E. Franklin Frazier, "The Negro Family," The Family: Its Function and Destiny, ed. Ruth Nanda Anshen (New York: Harper and Brothers, 1949), pp. 149-50.

[2]U. S. Bureau of the Census, op. cit., p. 43.

in urban areas. Negro men used to go off to work in turpentine and lumber camps, leaving their women behind. In the migration to the city, they left their wives and mothers of their children behind, intending to have them follow later. Once in the city, they developed new interests and formed new sexual associations. Thus, the cityward movement did not change the family mores of the group; the mother-dominant family remained the accepted pattern.[1]

Among the urban Negro population, a middle class has evolved. The public school has brought the Negro in contact with the larger American culture. Industry, especially during World War II, began to hire larger numbers of Negroes. With the economic and educational opportunities, the middle class Negro began to appear. For the most part, the middle class is composed of persons who attempt to maintain the conventional family life. They have allowed old folkways and mores to deteriorate and have placed much emphasis on respectability and adherence to the larger American culture.[2] The great majority of Negroes, however, are lower class people whose folkways and mores concerning family life are not compatible with those of the larger society.

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[1] Frazier, op. cit., pp. 150-53.

[2] Ibid., pp. 155-56.

The Family and Industry

The two social institutions--the family and industry --have affected each other in numerous ways. Discordance among the members of one institution may have repercussions within the ranks of the other. On the other hand, harmony in one institution may well engender congeniality in the other, although this does not necessarily follow. For example, an industry may demand constant travel and irregular hours for many of its employees in order to have a smooth-running, economically efficient organization, but the same demands may cause the family unit to become disorganized and discontented.

Highly seasonal industries frequently depend upon a flexible family system for survival. Such industries make large labor demands during their peak periods and use few employees in other periods. If migratory workers are not used, the demand for labor is met by the local community. A flexible family system is needed. The plastics industry in New England towns relies upon the flexible farm families who live in the area. When factory employment is high, wives and children work in the factory; when it again declines, the family collectively turns to farming and household labor.[1]

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[1]Delbert C. Miller and William H. Form, Industrial Sociology (New York: Harper and Brothers, 1951), p. 821.

Other seasonal industries depend upon the migratory work family. The family life of the transient worker is usually characterized by poverty, low education, unhealthful living conditions, and low moral standards.[1]

The Family as a Productive Unit

Historically, the family has been the central productive unit. In an agrarian society, each family is both consumer and producer. Organization is poor, labor inefficiently used, individual differences and capacities grossly ignored. With poorly developed systems of communication and transportation, products must be consumed on the spot. The maintenance of secrecy may also perpetuate the family as a producing organization. In the few trades which have maintained a high degree of secrecy, such as bell casting and certain kinds of perfumery, the production has remained as a family function. The conditions of poor communication, poor transportation, and highly guarded skills have prevailed until quite recently.[2]

The location of the work place may deter movement of production away from the family unit. If the location of an

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[1] Cf. supra, pp. 131-37.

[2] Theodore Caplow, The Sociology of Work (Minneapolis: University of Minnesota Press, 1954), p. 251.

economic organization is permanently fixed and its expansion is greatly restricted, its competitive position is inherently restricted. General farms and retail stores have held such a position in America. However, with the development of farm machinery suitable for large-scale production and the development of organized chain stores, these two family industries are slowly disappearing.[1]

Women as Home Workers

The tasks of homemaking are broad and varied. They may include sewing, knitting, gardening, interior decorating, and many other specialized functions as well as the normal functions of cleaning, preparing meals, and caring for the children.

During the first year of married life, the wife's work is comparatively light. Since the life and tasks are a change in the pattern of living, the husband and wife seek to meet the challenge together. With the birth of a child, the housewife's day is extended around the clock.[2] The child-rearing period normally lasts from 15 to 20 years. Children in the modern family are so close in age that even

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[1] Ibid., p. 252.

[2] Ibid., pp. 262-64.

families with three children may be through the child-rearing period in 20 years. Toward the end of the period the work load becomes considerably lighter for the housewife. Thus, by the time the husband is halfway through his work career, the full-time housewife may be in virtual retirement. Few occupations are readily available to women between 40 and 50 years of age. Preparation for outside work seems impossible to many, and old professions are largely forgotten. Nonetheless, an increasing number of women do go back to work.[1]

The wife who manages the home also plays a significant role with respect to her husband's occupation. The wife of a worker who hopes to climb in the work world must accept additional responsibilities. Her roles as companion and as hostess may contribute greatly to her husband's success. An attractive and socially graceful wife is an asset of immeasurable value. The wife's position in the woman's world is also important to her husband's work. She must make a favorable impression on the wives of the men for whom her husband works. Thus, the housewife may contribute significantly to the work status of her husband and the social status of the family.[2]

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[1] Ibid., pp. 263-65.

[2] Miller and Form, op. cit., pp. 684-85.

The worker's family tends to stabilize the work situation. The worker feels it does not pay to undertake the financial burden of moving his family and furniture. The dependent wife and family also may prove to be an asset in gaining higher salary and more stable work conditions. Marriage and family life are looked upon with favor in society. The worker's increased salary may be based upon an increase in his family rather than upon his performance as a worker. The stabilizing effect of family responsibility is quite apparent in the work world. Workers may be willing to put up with adverse conditions which they would not tolerate as single or newly married men.[1]

Women in Industry

During World War II large numbers of women entered the labor force. In 1951, over 19 million women were in the labor force, which was more than one-third of all workers. The majority of employed women were found in clerical, sales, and operative work.[2] In recent years there has been a distinct increase in the number of older women in the work world. Many older women had gone back to work during the war and remained, but the trend for older women to re-enter

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[1] Ibid., p. 751.

[2] Cf. supra, pp. 53-58.

the labor force continued in postwar years. Between 1940 and 1951 there was an increase of approximately five million women in the labor force, of which almost three million were 45 years old and older. In 1951 over nine million married women with husbands present, over one million married women with husbands absent, and almost three million women who were widowed or divorced were in the labor force.[1]

The statistics indicate the emphasis which Americans place on home and family life. While a girl is single she normally expects to support herself; in early years of marriage she may supplement the family income. During the period in which young children are in the home, women desert the labor force, but recently they have been returning after the children are old enough not to require constant care.

Approximately one-half of all married women who work are employed in routine jobs as operatives, clerical workers, or household workers. Most married women who work do so in order to raise the family standard of living. The picture is quite different for the married professional woman. She can hire adequate substitute care for her children. She can manage a full-time job and provide a happy home at the

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[1]Ernest R. Groves, Edna L. Kinner and Sadie J. Swenson, The Family and Its Relationships (Chicago: J. B. Lippincott Company, 1953), pp. 163-64.

same time, provided she has a cooperative and sympathetic husband. A professional man may well take pride in the achievements of a successful wife. In the most successful cases, the wife has had good training and work experience before marriage.[1]

Child Labor

Both state and federal laws regulate the employment of youth. The minimum age for general employment varies from 14 to 16 years among the states. The hours also are regulated in most states. A 40-hour week and an 8-hour day are the maximum work load for youth in some states. About one-half of the states prohibit night work for working youth. Typically, the law states that girls and boys under 16 or 17 years of age may not work between the hours of 6 p.m. and 7 a.m. The Fair Labor Standards Act as revised in 1950 defines all employment of children under the age of 16 as oppressive. A parent may employ his own child in occupations other than manufacturing and mining. The act also permits children to be employed in agriculture outside of school hours. The employment of all minors between 16 and 18 is declared by the Secretary of Labor to be particularly

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[1] Ibid., pp. 165-66.

hazardous for the children and detrimental to their well being.[1]

Retirement and the Family

Family relations may be disrupted during the early period of retirement. The retired worker contributes little to the family income. Within the family, he loses a certain amount of prestige.[2] He may find time heavy on his hands.

Financial help has been given to eligible families by the Federal Social Security Act of 1935. It provides for unemployment insurance, old-age and survivor's insurance, old-age assistance for persons over 65, aid to mothers and their dependent children, and aid to the blind. Two of the provisions are for older workers. Old-age assistance or relief is supplied by the general funds of the United States Treasury and in some cases from designated state or local funds. Old-age and survivor's insurance makes payments to workers over 65 and their dependents who, jointly with their employers, have paid into the federal treasury sums of money based on their earnings. In 1950, amendments to the Social Security Act extended benefits to farm employees, clergy,

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[1] Ibid., pp. 167-72.

[2] Miller and Form, op. cit., p. 782.

other employees of nonprofit organizations, and some self-employed.[1] With the steady inflation which has prevailed during the last two decades, the payments have been conspicuously low, but they certainly have been a real aid to the nation's senior citizens.

Family Life and the Industrial Arts Program

The foregoing analysis of the social institution of the family has revealed many significant facts which have implications for the industrial arts program. The thirteen points below have been selected for discussion.

1. Today, families are likely to be equalitarian, but maternal and filiocentric types are relatively common.

2. A mother-centered[2] family is common among the Negro population.

In early America, the family was typically paternal. The husband worked in or near the home. As industrialization, with its specialization and division of labor, became the basis of the economy, the husband was required to work away from the home. In his absence, the wife had to assume

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[1]Groves, Skinner and Swenson, op. cit., pp. 172-73.

[2]This is not to be confused with the maternal family.

more of the authority. Today, the authority within the family tends to be shared equally by husband and wife. The authority within the Negro family usually rests with the mother. A mother-centered family is also prevalent among the Negro population. In the latter type, the Negro woman usually lives with one man (either in or out of wedlock) at a time. The offspring are considered hers; the mother keeps her family together. Industry has been very influential in the changes which have occurred in the family structures in the United States. The industrial arts program must help students to understand the shift from home industry to the factory system. It must help them to understand the necessity for women to assume a larger share of authority. Schools have helped the girls of the nation to prepare for home management, but little has been done to foster an understanding of the industrial world. Girls, as well as boys, must have an understanding of industry to comprehend the changes which have occurred in the family folkways. The Negro family structure is based in the folkways and mores of the group. As Negroes learn more of the national folkways and mores of the industrial society, understanding may foster a wider acceptance.

3. Selection of a mate in the United States usually is based on romantic love.

4. Today, young people are marrying at younger ages than previously.

5. The family has retained the affectional, biological, socialization, and status-granting functions.

6. The family has an increased consumer role but a lower productive one.

Many factors affect the choice of a mate, but romantic love is the most important in the United States. Religion, family, financial status, social status, and other factors also affect the selection. There are higher percentages of married people in the nation than previously and young people are marrying at early ages. Since industry demands higher educational levels today, many married students are attending colleges. The schools must help these and other young people to understand the importance of the family in the society. They must help students to prepare themselves for marriage and the various functions of the family. The industrial arts program must help them to understand the productive and consumer functions of the family. It must help them to understand the interrelatedness of industrial economy and the need for a high level of consumption.

7. The stability of the family has declined; the number of divorces has steadily increased.

8. Attitudes toward sex have changed considerably within the present century.

9. Premarital and extramarital sex relations have increased.

The family is less stable today than in past years. In the 1950's the divorce rates were higher than in any previous decade on record. The percentage of persons who are married but not living with their spouses is even higher.[1] The instability may be caused, in part, by the change in sex mores. Women are no longer subordinated to men in matters of sex; they have equal rights, both morally and legally. The instability also may be reflected in the increase in premarital and extramarital sex relations. However, the mores of the nation strongly support the limitation of sexual relations to the family. The schools must help young people to understand the social problems of broken marriages. They must help them to understand the national mores and the social reproach associated with violations. Coupled with the fact that young people are marrying at younger ages, the increasing instability of family life indicates the need for direct study of the family--its functions and social relationships. The industrial arts program

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[1] Cf. supra, pp. 62-64, 375-76.

can help by fostering an understanding of industry-family relations.

10. Being a housewife is a full-time job while young children are in the family, but the child-rearing period is relatively short.

11. The wife and family share the feelings, attitudes, and in some respects, the responsibilities of the working husband.

12. In most cases, adolescents are prohibited from entering the labor force until they reach the age of 18 or older.

13. Federal and private old-age security plans have been developed to aid retired workers.

Industry affects the family life in many ways. Although the housewife is not considered part of the labor force, her multitudinous tasks keep her occupied full time while children are young. There is an increasing tendency for women to re-enter the labor force after their children become older. The industrial arts program can help these women who return to industry through adult education. It can foster an understanding of recent developments in industrial structure and functions. Such a program would be advantageous to many who never returned to industry, for the wife always is affected by her husband's work. Frequently,

she must assume part of the work responsibilities by being a hostess, a counselor, or a sympathetic listener. A general understanding of all facets of the industry in which her husband works may be a decided advantage. Because young people are prohibited from entering the work force at an early age, they are more likely to stay in school longer. They do not contribute to the family income as early and may place extra financial burdens upon it because of education. The financial strain on retired workers has been lightened considerably through both federal and private retirement systems. Usually, the income is decreased greatly upon retirement. The industrial arts program must help young people to understand the necessity for preparing for retirement throughout one's work life.

Because the American family is frequently equalitarian, because a mother-centered family is common among Negroes, and because industry has been influential in the evolution of these two types, the industrial arts program must help all students in secondary schools to understand the industrial folkways and mores in their dynamic state. Because selection of a mate is usually through romantic love, because young people are marrying at an early age, and because the family has retained some very basic functions, the industrial arts program must help to foster an understanding of the importance

of the family and its functions in an industrial society. Because women are returning to industry more frequently when the tasks of full-time housewife diminish, because the wife and family must share the feelings, attitudes, and responsibilities of a working husband, because young people are prohibited from entering the labor force at an early age, and because retirement may cause financial and social problems in the family, the industrial arts program must help both secondary school youth and adults to understand the many ways in which industry affects family life.

CHAPTER XIII

EDUCATION

In the broad sense, education and socialization are synonymous. The process of learning is living or participation in society. From birth, each individual must begin to learn the ways of living and behaving which are acceptable to the society to which his family belongs. The adjustment of a baby to a feeding schedule is an early educational act. Education is a continuous process. The individual learns from society the behavior which is expected of him and at the same time contributes to others his interpretations of society's demands. Thus, each individual becomes both pupil and teacher.[1]

Socialization seeks efficaciously to perpetuate society. That is, selected beliefs, values, and behavioral patterns are transmitted consciously to the young. Since human behavior is essentially social, behavior detrimental to the well-being of society also may be transmitted. Things which

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[1]Wilbur B. Brookover, A Sociology of Education (New York: American Book Company, 1955), pp. 4-5.

are taught are determined socially. Whether or not the young ruffian is taught how to pick pockets and to smoke marijuana and whether or not the fourth grade pupil learns long division are determined by the social situation. Each social group seeks to produce in the learner a change in behavior compatible with the values deemed important by the group.

Education, in a more specific sense, is merely a part of the socialization process. In the United States, education is conceived of most commonly as formal instruction in public and private schools and colleges. As a social institution, the American school is a distinct cultural achievement. The educational system has not been borrowed or transplanted in its entirety. It has developed as an integral part of the democratic way of life in America. Both democracy and the educational system have been flexible and dynamic. Both have developed as important social institutions of a unique society.

The Educational System

Formal or deliberate education is that part of the socialization process in which learning is achieved through deliberate actions centered upon the learning process. It may be the task of learning to read in first grade, or of learning to skate, through deliberate self-action. According

to Mason, "formal or deliberate education is education aware of itself--aware of what it is about."[1] Schools are highly organized efforts in the field of formal education. Schools are used consciously to select and to teach certain things and to develop certain behavioral patterns in children. The selection is by no means universally the same, nor are the social demands upon the school the same.

Education for All

Formal education in the United States has been influenced by religious, private, philanthropic, and public interests. At the beginning, schools in colonial America were designed to prepare men for the ministry and to teach the children of the upper classes to read, to write, and to calculate. The Old Deluder Act of 1624, passed by the Massachusetts Bay Company, provided that every township of 50 households must provide one teacher and that every township of 100 households must provide a grammar school so that "ye ould deluder, Satan" could not keep men from knowing the Scriptures. The idea of free, but not compulsory, public education was established by the Act. The idea spread

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[1]Robert E. Mason, Educational Ideals in American Society (Boston: Allyn and Bacon, Inc., 1960), p. 8.

throughout the colonies. In Virginia, philanthropic interests sought to eradicate ignorance among the poor and underprivileged. It was assumed that Virginia gentlemen would attend to the education of their own children.[1]

Education for all was much further along the road to reality by the time of the American Revolution. Religious training had become a source of sectarian strife. Education so that one could pursue his own religious beliefs developed as a mitigating force. During the Jeffersonian period, emphasis shifted to the equality of man and the equality of opportunity. During the Jacksonian period, the demand for practical and vocational training for everyone became stronger. The struggle for public support and for compulsory education continued well into the present century. The first compulsory attendance law was passed by Massachusetts in 1852, but it was 1918 before Mississippi passed a similar law. The use of taxes to support public secondary education was established legally by the Kalamazoo case of 1874. Higher education was encouraged and supported by the Morrill Act of 1862, which granted land to the states for use in higher education. Thus, public support of education was well established

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[1]H. Otto Dahlke, Values in Culture and Classroom (New York: Harper and Brothers, 1958), pp. 15-17.

by the turn of the century, and universal education was becoming accepted.[1]

Universal free education has been a relatively recent development. In 1870, only 57 percent of the population aged 5 to 17, inclusive, were enrolled in public elementary and secondary schools.[2] By 1920, this figure had risen to 78.3 percent. The peak was reached in 1940, with an enrollment of 84.4 percent. In 1956, 83.6 percent of the school age population were enrolled in public schools.[3] In the same span of time, the average daily attendance of pupils enrolled rose from 59.3 percent in 1870[4] to 89.0 percent in 1956.[5] Although the percentage enrolled stabilized after 1940, the percentage of pupils regularly attending school has continued to increase.

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[1] Ibid., pp. 18-20.

[2] U. S. Bureau of the Census, Statistical Abstract of the United States: 1949 (Washington, D. C.: Government Printing Office, 1949), p. 115. This figure does not include population of Indian Territories.

[3] U. S. Bureau of the Census, Statistical Abstract of the United States: 1959 (Washington, D. C.: Government Printing Office, 1959), p. 113.

[4] U. S. Bureau of the Census, Statistical Abstract . . . 1949, p. 115.

[5] U. S. Bureau of the Census, Statistical Abstract . . . 1959, p. 113.

One of the initial goals of education in America, the eradication of illiteracy, has been accomplished almost completely. Only 2.5 percent of the total population age 14 and over were illiterate in 1952. Of those who were illiterate, 53.2 percent were 55 years old or older. Only 1.8 percent of the white population were illiterate in 1952, but 10.2 percent of the nonwhite population were illiterate.[1] The nonwhite population is comprised almost entirely of Negroes.[2] Since the Supreme Court decision of May, 1954, declares that discrimination by color in public schools is an unconstitutional act, it is likely that the literacy goal will come even closer to a reality.

School enrollment varies by age, sex, color, and place of residence. Almost all the children of elementary school age were enrolled in school in 1958. There is a distinct change in the enrollment of children of high school age; the percentage of youngsters enrolled in schools decreased 10.3 percent between the age groups 14 through 17 and 10 through 13. Some of the decrease may have been caused by early graduation, but it is likely that many left school before graduating. More girls than boys left school

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[1] Ibid., p. 112.

[2] Cf. supra, p. 38.

early, a situation which has developed since 1952. For several decades prior to 1952, boys dropped out of high school at a higher rate than girls. The decline in enrollment in 1958 was greatest for nonwhite females and next for white females. The white males had the highest percentage of the high school age group enrolled in schools. The rural areas of the nation seem to have larger proportions of pupils leaving school early. College attendance appears to be associated with urban areas. Most institutions of higher learning are located in the cities, thus making facilities more available to the urban dweller. College attendance is highly selective with respect to age and color. Of those attending institutions of higher learning in 1958, approximately two-thirds were male. The white population is about twice as likely to be attending college as the nonwhite population.[1]

The median number of years of school completed has been increasing steadily over the years. By 1940 the median number of years of schooling for the total population 25 years old or older was 8.6 years; by 1950 the median was 9.3; and by 1957 the figure had risen to 10.7. The median number of years was somewhat higher for females than for

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[1] Ibid., pp. 104-23.

males and was considerably higher for the white portion of the population. In 1950, the white segment had a median of 9.7 years compared with a median of 6.9 years for the non-white. The younger the person in the age group of 25 years old or older, the higher the level of schooling. It is evident that the educational level of the nation will continue to rise.

Decentralization

Americans' fear of a strong centralized authority has been exhibited by the tenacious manner in which control of the schools has been kept decentralized. The early school laws of the colonial period set the pattern of local autonomy in school management. As the nation grew, millions of immigrants of various cultures sought a home in the new country. The different religious beliefs and divergent social patterns made necessary local control in the early period of settlement. Eventually, state systems evolved. Each state in turn developed county and local school systems which were tied loosely to the state board.[1]

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[1]Willis Rudy, "Historical Perspectives and the Contemporary Scene," Education and the Social Order, ed. Blaine E. Mercer and Edwin R. Carr (New York: Rinehart and Company, 1957), p. 235.

Decentralization continued, partly because it was feared that federal aid would bring federal control. Privately controlled schools contributed to the determination not to have schools under a central system. The Dartmouth case of 1819 and the Oregon case of 1925 removed the fear that education would be dictatorially controlled by a central agency. Private schools, both secular and religious, have developed extensive educational programs. The diversity has fostered freedom, spontaneity, and experimentation on the one hand but, on the other, has served to disperse vital resources and to thwart concentrated effort.[1]

Expectations of Education

Americans have great faith in formal education. It is a criminal offense to keep children of certain ages out of school. Education is believed generally to be good for almost anyone, child or adult, who can attend a formal program. The expectations of various groups concerning formal education vary considerably.

Religion.--Different groups have different ideas concerning the place and the function of religion in the school. Religion was a central purpose of the early New England

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[1] Ibid., pp. 235-36.

school system. Present-day organization of parochial schools by Catholics, Lutherans, Seventh Day Adventists, and other religious groups is evidence of the high level of religious emphasis which germinated in colonial America. After the American Revolution, religious instruction as a function of the public school became impracticable; it was impossible for the schools to offer religious training to all faiths. Thus, the non-sectarian school was a necessity. This fact, coupled with the doctrine of separation of church and state, fixed the general policy concerning religious instruction. Many contemporary public schools have compromised the issue by allowing released time for religious instruction. Several cases testing the legality of released time have been tried in the courts. The court has upheld released time, provided the instruction is given outside the confines of the school.[1]

College Preparation.--Some parents expect the schools to teach solely toward college entrance. They want their children to have a highly academic program. Usually of the upper classes, they do not object to the provision of vocational education for the children of the lower classes; they do not wish, however, to have their children participate in the vocational program. Usually, parents in the lower

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[1]Biesanz and Biesanz, op. cit., pp. 254-55.

classes perceive little need for the academic training; they prefer an education which will help their children to make a living upon, or even before, graduation from high school. Frequently, more extensive equipment is needed for vocational training than for academic training. School board members are, as a rule, business leaders of the community. Such leaders are more likely to be concerned with academic training than with vocational. Consequently, when resources are limited, they choose to offer only an academic program. Large comprehensive schools usually offer both academic work and varying levels of vocational education.[1]

Basic Skills.--Most parents expect the schools to teach the basic skills to their children. Not all parents agree on what the basic skills are; some would include only reading, writing, and arithmetic, while others would add biology, chemistry, physics, history, and the other social sciences. In reality, there is more controversy over the methods and placement of basic courses than there is over their inclusion in the program. Many parents seem to consider the teaching of the basic subjects synonymous with education itself.[2]

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[1]Cf. Ibid., pp. 255-57.

[2]Brookover, op. cit., pp. 49-50.

In varying degrees, parents expect the schools to transmit socially accepted values to their children. Teachers who do not teach according to socially accepted norms of behavior are usually asked to resign. Most parents expect the teacher to accept responsibility for developing moral values. Americans in general apparently expect the moral codes and values of the community to permeate the structure and activities of the school system.[1]

Social Mobility.--The schools are expected to be avenues of social mobility. Parents who are college graduates expect their children to go to college to maintain the family social status. Parents who have not gone to college frequently aspire to college degrees for their children. Because schools are recognized as vehicles of social climbing, they are opposed by some groups. For example, in many rural farming areas, education beyond elementary school may be deemed a waste of time. This is particularly true in Amish communities. The Amish recognize that education frequently causes their youth to leave the group. Therefore, as a group, they are opposed to education beyond the basic rudiments.[2]

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[1] Ibid., pp. 50-51.

[2] Ibid., pp. 52-53.

Recreation and Entertainment.--Secondary schools and colleges also are expected to provide the public with entertainment. Football, baseball, and basketball teams are deemed a necessity. Track, swimming, tennis, hockey, lacrosse, and golf teams are found in many schools. Dramatics, band, orchestra, and choruses no longer are considered extras, but are an integral part of the school program. The public demands the entertainment produced by these activities. Especially in the area of sports, the school must hire special teaching personnel or coaches so that the school can have a winning team. A winning team and a colorful band are partly a matter of community pride and ethnocentrism. They become symbolic of the school because not infrequently they are the most publicized features of the total school program. Other features of the program are not so readily displayed. In some rural communities, the high school basketball game is the largest social function of the week. It may be the only school function which can be thought of as belonging to the community. Not all of the public are pleased with the emphasis placed on sports and other non-academic activities. Many parents think that the school is wasting money and energy on such activities. They consider such activities inimical to the systematic pursuit of knowledge. However, as Brookover has pointed out, research has not yet provided evidence

on which to base a conclusion concerning the relationship between successful teams, band, or dramatics and the quality of the less observable programs.[1]

Other Agencies of Education

The church, libraries, newspapers and magazines, radio, television, county agents, and civic and social organizations consciously make some effort to educate--that is, to change the behavior of people. The main function of some of the agencies may not be to educate, but their programs may cause actual change in behavior and values. The various segments of the population demand different levels of education from each of the agencies even as they do from the schools.

The church is essentially an educational institution. Its principal concern is to instruct its members so that their behavior and values will become compatible with those of the church body. Through services, Sunday schools, Bible classes, youth groups, and other functions, the church attempts to reach all age levels.

Other agencies of education, such as health departments, public libraries, and newspapers, render services

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[1]Ibid., p. 56.

which are educative. The county and state health services may conduct classes in first aid, child care, disease prevention, pest control, and many other related fields. Libraries provide the public with books and periodicals and often conduct programs and produce educative displays. Through newspapers, magazines, and journals, various segments of the population are able to learn of new developments and to become aware of the views and values of other people. Similarly, radio and television may be used for educational growth.

In rural communities, especially, the county agent conducts extensive educational programs. Under the guidance of his office, information on improved methods of planting, cultivating, breeding, and other agricultural accomplishments is disseminated. Such information may be spread by demonstrations, experimental field projects, short courses, and publications. Homemaking organizations bring the work of the agricultural experiment stations to the home. Improved methods of home management and care are taught to the rural housewife. The 4-H clubs work with the youth and help them to learn farm practices. The county agent coordinates the activities of each of these rural programs and serves as a consultant to the farm population of his county.

Many civic organizations are interested in educational activities. The Rotarians, Lions, Masons, Knights of Columbus, and others conduct campaigns to change behavior. The campaigns may have as their goal to keep the city cleaner, to control pests, or to improve the sewage system. Such organizations support the public schools and often contribute to them directly. Rewards for high scholarship, playground equipment, and band equipment are frequently supplied through the efforts of civic organizations.

Education and Industry

The work plant demands that its employees be educated in varying degrees. Although the most rudimentary elements of socialization acquired in the home are sufficient in some jobs, most occupations also require some formal schooling. At the other extreme, the professions may require seven or eight years of higher education. In recent years, industry has found it necessary to dedicate much of its time and its resources to formal education.

Pre-work Schooling

In the formal school situation as it exists today, two cultures exist almost indistinguishable in their interrelatedness. The peer culture is created by children in

approximately the same age group, playing, working, fighting, thinking, and participating in an infinite variety of activities characteristic of their period of development. The school culture is created by adults for the express purpose of making adults of children. Teachers and school administrators have the responsibility of imposing the right, the good, and the useful ways of life upon the children. Such aspects of life are derived from society, and authority to teach them is obtained through the consent of the people.[1]

The school's functions have a direct influence on the child's participation in an industrial society and on behavioral changes which are directed toward future participation in the work world. The school and the peer cultures blend, but the school culture is expected to dominate.

One of the functions of formal education is to help children to adjust to routine and to develop good work habits. As he matures, the child is expected to develop increasingly longer interest spans. He must learn to concentrate in one area for a given time and then shift to another. Adults think that the child must learn to work hard at his lessons.[2]

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[1]Delbert C. Miller and William H. Form, Industrial Sociology (New York: Harper and Brothers, 1951), p. 523.

[2]Ibid., p. 524.

Adults also think that children should learn to obey and respect authority. Activity is regulated by the teacher and the principal through formal and informal rules. Talking and movement are subject to the rules and the wishes of adults. Behavior is controlled by various forms of approval (smiles, high grades, class recognition, and privilege) and of disapproval (frowns, low grades, and various forms of punishment). The peer group participates in regulating behavior. The peer group vies for recognition and rewards. Disapproval as expressed by the peer group does not have the mitigating parental and sibling love found in the home. Thus, the child is coerced into recognizing and obeying authority.[1]

The schools are expected to engender a competitive spirit. Initiative and personal progress are highly rewarded. Most parents desire social advancement for their children, but the socialization within the home and the neighborhood creates behavioral patterns which are associated with the class into which the children were born. The school tends to try to raise the standards of lower class children, but in most cases, the home life proves to be dominant. The life patterns of the middle class are reinforced by the

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[1] Ibid.

school. Although the school attempts to democratize the behavior of the upper class, it is not very successful. If the school does seem to be affecting the values of an upper class child, it is highly probable that the child will be sent to a private school which will uphold the upper class tradition.[1]

Although the school system tends to reinforce the social status into which the child is born, it does serve as a ladder of social mobility. Many children who were born into a relatively low social status have the opportunity of associating with children of higher status and of developing the social skills necessary to rise socially in both formal and informal school situations. Academic and vocational competencies demanded by higher status may be acquired through the school. The formal school system provides the best means of social climbing.[2]

Although the schools foster competition among pupils, the educational system also seeks to engender congeniality. It hopes to help pupils learn how to get along with peers and adults. The peer culture may hold values which vary

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[1]Cf. W. Lloyd Warner, Robert J. Havighurst, and Martin Loeb, Who Shall Be Educated? (New York: Harper and Brothers, 1944), pp. 56-57.

[2]Cf. supra, Chapter XI.

considerably from those of the adult culture. A good fighter may be granted high prestige in the peer group. Friends may be chosen because of good looks, or high athletic ability, or a quiet manner, or for a host of other reasons which may or may not be compatible with adult values. Values among peers are complicated further by the imposition of home and adult values. What a child's family thinks of another person influences what the child thinks of him. The values are influenced further by the opinions of other persons in authority. Values are not necessarily the same in all situations. For example, playground values may be different from classroom values, and classroom values may differ from lunchroom values. Those children who are able to win acceptance in both the peer culture and the school culture are most satisfactorily adjusted.[1]

The formal school system seeks to provide terminal education for the great masses who do not go on to institutions of higher education. As early as the eighth grade, many school systems demand a decision on the child's future vocation. He must decide whether he will take a general non-college-preparatory course, an academic course, or a commercial course, or will go to vocational high school.

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[1]Miller and Form, op. cit., pp. 526-27.

For the student who chooses to go to vocational high school, the choice is irrevocable. He effectively commits himself to an occupation which does not require higher education. In the academic course, the final vocational decision may be delayed until the student is well into college or even in graduate study. The big decision usually comes after high school; the student must decide if he wants to go to college or to enter the work world.[1]

The decision to leave school at any point and to enter the work world is an extremely important one. In general, the earlier a pupil leaves school the greater the number of occupations from which he will be barred permanently. If he leaves before he is graduated from high school, he will not be able to seek employment in any of the learned trades, and many kinds of bureaucratic employment will be forbidden. He is virtually guaranteed a lifetime in manual work or in the low paying, insecure white collar fringe. The damaging effect of an early departure from high school is not always present. In a few occupations, such as small business, entertainment, or sales, a low level of education may not be detrimental. However, as Caplow indicates, all professional

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[1]Theodore Caplow, The Sociology of Work (Minneapolis: University of Minnesota Press, 1954), p. 218.

and technical work, the public and large industrial bureaucracies, the skilled trades, and the mechanical specialties require a definite level of education for admission.[1]

Industry and labor have a great interest in the functions and activities of the schools. Besides learning skills necessary in industry, pupils also learn attitudes toward business and labor. Schools cooperate with industry; they want their pupils to obtain the skills and attitudes which will be advantageous to them in industry. Likewise, industry supplies the schools with literature, scholarships, honor awards, and other things which are mutually beneficial. Schools conduct field trips and show films to acquaint students with the operations of various industries. Industry wants the schools to teach the elements of free enterprise and the benefits of it. It wants them to give the students a practical education aimed at participation in industry.[2]

Direct Industrial Participation

Upon graduation from college, students expect to continue formal education in industry. Large industries have highly institutionalized schools, many with classrooms,

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[1]Ibid., pp. 218-19, 274.

[2]Miller and Form, op. cit., pp. 807-10.

dormitories, and graduating classes. Such companies offer a high degree of security. Students feel that the large investment will not be discarded easily by the company. Students may remain in a familiar setting and gradually become a part of the work society.[1]

Industrial participation in a formal type of education began with the apprenticeship system. Many apprentices in early America were bound to their masters by indentures for periods of ten years or more. The masters were obligated to supply lodging, board, and clothing. The regulations imposed on apprentices were many and rigid. They had long hours of hard work with little compensation. As the factory system took the work out of the home, apprentices were paid small salaries instead of room and board. In some cases, the apprentices' parents had to pay for the expenses incurred in training. Conditions did not change substantially until the pioneering legislation of the state of Wisconsin in 1915. By 1937, the federal government passed the Fitzgerald Act, which provided for national standards of instruction, wages, supervision, and evaluation by a federal policy-making body. The act remains essentially the same today

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[1]William H. Whyte, Jr., The Organization Man (Garden City: Doubleday and Company, Inc., 1956), pp. 121-22.

(1960). Apprenticeship programs contribute significantly to the demands of industry for skilled labor.[1]

The corporation school developed in the latter part of the nineteenth century. With the expansion of the factory system, industry demanded large numbers of technically trained persons. The public schools were not meeting the demand. Industrialists had to establish their own schools to meet their requirements. By 1916 approximately 60,000 boys were attending corporation schools. The subject matter taught by such schools became increasingly broader. The corporation schools prepared many individuals for promotion, improved the quality of production, halped control labor turnover, reduced waste, and helped to control needless accidents. Corporation schools were highly successful.[2]

During the first two decades of the present century, extensive education in industry was deemed superfluous. Elementary school education, supplemented by the corporation schools, apprenticeship training, and on-the-job training, was all that was thought necessary. The advance in technology, spurred by two world wars and a consumer economy,

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[1]Harold F. Clark and Harold S. Sloan, Classrooms in the Factories (New York: New York University Press, 1958), pp. 4-5.

[2]Ibid., pp. 6-7.

has created an entirely different attitude toward formal education. Clark and Sloan explain the need for extensive educational programs within the industry in the following words:

> . . . Product diversification, multiplant development, and decentralized organization necessitate a prolonged period of induction and suitable orientation procedures for new recruits; manpower shortage calls for upgrading and retraining on a huge scale; and, above all, new techniques of management, the never-ending streams of new inventions flowing from the experimental laboratories and research centers, and the rapidly progressing plans for atomic energy and automation require that corporation personnel be continuously informed and instructed and remain flexible, ever receptive to change. The notion that education ends with a college degree is completely untenable in industry today. Colleges and universities are doing what they can to provide basic technical, managerial, and liberal-arts training as well as specialized instruction in graduate programs, seminars, and institutes, but the pace is so rapid that educational institutions removed even one step from the reality of production are frequently lacking in both equipment and experience.[1]

Industrial training programs today are manifestations of the deep change in society and the type of employee desired. Whyte thinks that there has been a shift from programs designed to help a person perform a productive task to programs designed to teach techniques of behavioral manipulation--controlling or coordinating the work of others.[2]

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[1] Ibid., p. 9.

[2] Whyte, op. cit., pp. 123-24.

Industrial education has become a powerful tool for molding the kind of work society conducive to the high production of an industrial economy.

In a study conducted by Clark and Sloan in 1957, it was established that 84.8 percent of the 296 companies who answered the questionnaires conducted some sort of educational activity. Most of the corporations conducted programs of education within the jurisdiction of the company. Of the group that replied, 66.8 percent not only conducted their own programs but also cooperated with one or more colleges or universities in course offerings. Almost all corporations offering education through colleges or universities reported that the expenses had been defrayed. Over one-half of the companies offering training had courses in orientation, management and supervision, technical and professional areas, and human relations. Some corporations also gave instruction in general education.[1]

During the first half of this century, management has lost ownership of industry. Management has been charged with the responsibility of operating vast industrial enterprises. Such operation requires ability in coordinating the various skills and knowledges of a technical nature.

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[1]Clark and Sloan, op. cit., pp. 13-24.

Education has been the means by which managers and professional personnel have been developed. To a great extent the development has been internal. Industrial education programs are achieving an integration of technical skills and human relations which promises to sustain a high degree of social change.

Education and the Industrial Arts Program

From the foregoing sociological analysis of the institution of education the following thirteen facts have been selected for discussion. They are grouped in order to facilitate the discussion.

1. Formal education consciously selects certain beliefs, values, and behavioral patterns to be transmitted to the young.

2. Universal free education has developed primarily within the present century.

The task of transmitting society's culture from one generation to the next has become exceedingly great. Through specialization the cultural base has become so vast that it is impossible to expect anyone to be able to comprehend it in its entirety. To assure the specialization needed in a democratic society, the universal free education system has

evolved. The formal education programs must select the beliefs, values, and behavioral patterns which society deems important for transmission to the young. All too often the selection of items from the culture is arbitrary; parents and teachers choose items with respect to their limited experience. Education must make comprehensive analyses of society and its culture in their dynamic interrelatedness, in order to select those items in the culture to be perpetuated.

3. Young people are more likely today than in past years to remain in secondary schools until graduation.

4. College attendance is highly selective with respect to residence and color.

5. Public schools have remained decentralized because of the strong fear that centralized control could lead to education inimical to the welfare of all.

Young people remain in school until graduation from high school for many reasons. Industry has been demanding higher levels of education than formerly. Many large corporations demand a high school education or higher for almost all of their employees. The rural areas of the nation have proportionately higher percentages of pupils leaving school before graduation than the urban areas. Because many of these young people are likely to move away from the farms

to positions in industry, the schools must help them to understand the necessity for completing high school. The schools must help students to see the rising level of education and the necessity for advanced education in many fields of specialization. The industrial arts program must help young people in all areas of the nation to understand the function of education in the industrial world. It must help them to know the educational demands of a technical culture. The decentralized educational system in the United States has not always been beneficial to the demands of the technical culture and the industrial society. Frequently, the school leaders in non-industrial areas see little need for industrial education. The school systems are often too small to offer a comprehensive program. The majority of children in such areas will be residing in highly industrial urban areas as young adults.[1] A more centralized system may be more beneficial to the industrial arts program. Through centralization adequate facilities can be provided in rural areas and in other low economic areas.

6. Schools are expected to offer both academic and vocational education.

7. Schools are avenues for social mobility.

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[1]Cf. supra, pp. 68, 141-42.

8. Entertainment and recreation have become functions of the public schools.

9. Formal education is rendered by churches, libraries, newspapers and magazines, radio, television, county agents, and civic and social organizations.

Formal education has many functions. The public schools must help some students to prepare for college and help others to gain competencies toward a vocation. They serve as avenues for social climbing.[1] Especially through sports, dramatics, orchestras, and bands, the schools provide recreation and entertainment for pupils and the public. The schools have become community centers, rendering services to adults as well as children. The formal education of the community is served by many institutions other than the school. The schools have been cooperating with other agents and must continue to do so. The industrial arts program, as part of the general program of the school, must serve those functions which pertain to an understanding of industry. It must help the student to become familiar with the various vocational choices he might make if he elects a vocational curriculum. It must help students to learn of the various industrial occupations, their socio-economic

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[1]Cf. supra, pp. 329-30.

status, and the level of education required. It must help students to use the library, television, newspapers, and other community educational facilities which foster an understanding of industry.

10. The earlier a pupil leaves school, the greater is the number of jobs from which he will be barred permanently.

11. Industry expects students to acquire a general knowledge of industry.

12. Apprenticeship training is extremely important in certain skilled occupations.

13. Most industries offer programs of formal education for selected employees.

Industry depends upon various forms of formal education to perpetuate and to extend its culture. It depends upon the public school system to acquaint young people with industry and to teach many basic skills necessary to the various occupations. The industrial arts program must help students to understand industry--its structure and its functions. The industrial arts program must also acquaint students with the educational facilities within industry. Large numbers of persons are supplied to certain skilled occupations through apprenticeship programs; a few occupations are difficult to enter except through this process. The

industrial arts program must help students to learn of the formal education opportunities within industry. Most large corporations offer a variety of formal education programs; the predominant programs are those centered about management training and human relations.

Because the United States has universal free education in keeping with democratic ideals, because public schools have remained decentralized, and because all formal education consciously selects culture items to be transmitted to the young, educators must make comprehensive analyses of society in its dynamic interrelatedness in order to select those items in the culture to be perpetuated. Because high school graduation is almost a necessity, because college is not functionally available to all, and because public schools have remained decentralized, the industrial arts program must help all students to understand the educational demands of a technical culture. Because the schools must teach both academic and vocational education, because they are avenues of social mobility, because they serve as centers of recreation and entertainment, and because many other organizations engage in formal education, the industrial arts program must help youth to understand themselves and the services of formal education which can help them to develop fully. Because industry demands varying levels of education, because it

expects pupils to learn about industry, because apprenticeship programs are important in certain trades, and because most industries offer formal education programs for selected personnel, the industrial arts program must help students to become acquainted with available educational facilities, both in and out of industry, which have a bearing on industrial positions and industrial understanding.

CHAPTER XIV

SOCIAL CHANGE

Thirty years ago the American culture was drastically different from what it is today; thirty years hence the social change may be phenomenal. The existing social institutions probably will have different structures and functions. Various social processes will function at rates different from today's rates. To be able to understand what society will be like in the future requires a knowledge of the phenomenon of social change.

The Nature of Social Change

Social change is the empirical development of new items of culture or the substitution of new cultural items or concepts for old ones. This does not imply that all elements of a society possess a common culture. Among individuals and subgroups there may be great differences in cultural items and concepts. Minute differences constantly develop in all societies. A mother passes on a skill in home management to her daughter who may make small

innovations in procedure or in implements used. The concept of social change embodies small variations in culture but is principally concerned with fairly large scale change in cultural objects and values. Cultural change, as used in this chapter, will be changes in items and values of the majority of the people in the society. In other words, cultural change, as discussed, will be societal changes and not subgroup changes.

Change need not be synonymous with progress. Change may be an improvement or it may be a retrogression. Indeed, some changes may be considered an improvement by one group and at the same time be a deterrent to another. By definition, progress is positive and good, but change can be good or bad, depending upon the position from which it is viewed.

Technological Innovation

A panoramic view of an urban development reveals a host of material items developed by man. The tall buildings, automobiles, buses, stores, libraries, homes, theatres, telegraph lines, bridges, roads, and other items are evidence of the cultural change which has occurred. The culture has accrued sufficiently to allow these developments, but the accumulation has been a gradual process. The material culture which exists is the result of the utilization of culture

from earlier societies and an addition to the accumulation by each successive society.

Inventions are created primarily from existing elements of culture. The growth of culture occurs by the accumulation of the small changes. The early toolmaker began by using the flaked stones which came from rocks pounded together. Through picking, grinding, and chiseling, the implements were gradually improved. Later, bone was used as a material for tools; antlers and tusks of ivory were added; eventually, soft metals were extracted from the ground and hammered into tools. In recent years, reduction and alloying of metals have allowed superior materials to be used.[1] Through powdered metallurgy and through the development of industrial ceramics, during the last two decades extremely hard metals have been made practicable for use in the manufacture of tools. Thus, the tool maker of today has used the culture derived through the ages to develop tools capable of machining materials for industry that could not have been machined five years ago.

Cultural growth is similar to growth in other fields; that is, the number of new elements exceeds the number of

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[1]William F. Ogburn and Meyer F. Nimkoff, Sociology (Boston: Houghton Mifflin Company, 1950), p. 507.

old elements which are lost. If the new merely replaced the old, culture would be stationary. For this reason, the addition of new features in the culture must expand the total number of cultural elements. The invention of a cultural item may be mechanical, such as the invention of the light bulb, or it may be a social invention, such as a form of city government. Inventions, both mechanical and social, advance the total culture of a society.[1] The development of a given invention as a result of preceding culture is inevitable. The inevitability of invention may be noted in the fact that many important inventions have been independently created almost simultaneously by inventors in different societies.[2]

Social change may occur by the addition of new elements or by an increase in the frequency of existing elements. Thus, new elements of the culture may be devised or may evolve from a new combination of existing elements. Moreover, growth through existing elements may add completely new elements. For an example, the automobile created a new element by combining many features which already existed in

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[1] Ibid., pp. 507-508.

[2] Arnold M. Rose, Sociology: The Study of Human Relations (New York: Alfred A. Knopf, 1956), p. 336.

the society. The gasoline engine, the principle of compression, the electric spark, differential gears, and the friction drive clutch were existing features which went into the creation of the new element known as the automobile. Elements of a culture are not readily lost. Since man has developed language he has had symbols with which to pass on his culture from one generation to another. Surely the culture must have moved slowly before history began. The cave man, the tree man, and so on up through the ages, had to pass culture by word of mouth and by demonstration until it was possible to utilize symbols to convey his achievements. Elements have been lost, however. For example, the art of making stained glass never again has reached the perfection it once achieved. The Egyptian process of embalming is still a mystery to modern man. Perhaps man's utilization of economical means of printing may preclude for future generations any similar losses.[1]

Customs and ceremonies also accumulate as nonmaterial culture. Ideologies, however, develop in every society. The material culture is much more noticeable and thereby may seem to be developing faster than the nonmaterial. However, the heritage of people born today is far larger than the

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[1]Ogburn and Nimkoff, op. cit., pp. 508, 516.

heritage of those born a century ago. Accumulation of ideas, ideals, and rational ways of life is obtained through symbols as well as through practices and passed on to successive generations. Thus, the nonmaterial culture which is inherited today is of tremendous size compared to nonmaterial culture inherited just a few generations ago.

Continuity

Every new cultural item is an outgrowth of existing cultural traits. The rubber tire used today on automobiles has been developed slowly through a series of ideas and inventions, each of which has contributed minutely to the final product. No doubt the tires of today will be changed five years hence. Thomas was issued a patent for the use of a rubber tire as early as 1845. In 1869 Cheever received a patent for a solid rubber tire held in dovetail grooves in the rim. In the same year, Green patented a solid tire in which wire was used as the core. In 1887 Harris patented a tire which had two side wires that ran along the lateral edges of a solid rubber tire to hold it in the rim. Following Harris' patent, Klauser and Southland Patented a solid rubber tire that had a wire gauze tape at the base of it. The tape was a flat strip impregnated with soft rubber which then was fused with the solid rubber tire that surrounded it.

Thus, wire and rubber were used together through many stages; before the turn of the century, there were 30 patents issued in the United States and Great Britain for the production of rubber tires.

It took more than merely wire and rubber to produce the tire of today. Wire was braided, the tensile strength was increased, and more flexibility was obtained. It was continually improved. The processing of rubber and the use of synthetic rubber increased the wearing quality of the rubber, but still it was not enough. Fabric cotton was used; it was replaced by the rayon and nylon which are used extensively today. Only a few of the cultural items which were used to develop the tire of today have been mentioned. Others include the discovery of rubber, the refinement of material in order to produce wire, the testing equipment to study the properties of wire, and the developments in the textile industry which brought about the production of the synthetic fabric nylon.[1]

To some Americans in the 1920's, fascism appeared to be a new invention in political thought. If they thought this, it was because they were not conversant with Italian

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[1]For further discussion of the development of the modern pneumatic tire, see Walter E. Burton, The Story of Tire Beads and Tires (New York: McGraw-Hill Book Company, Inc., 1954).

history. The foundations of fascism were in the traditions and the ideology of the Italian peninsula for many generations prior to the appearance in the twentieth century of the political theory known as fascism. Whatever is different in the future must grow out of the roots which were planted in the past and are alive in the present. Invention is merely a part of a larger evolutionary development. Significant changes are possible only because the inventors have been able to see more and further, thus being able to correlate and coordinate existing cultural traits.[1]

Diffusion

New ideas or inventions evolve through a process of cross-fertilization. Ideas in one field may be applied in other fields. As an example, the study of human ecology[2] developed primarily because certain sociologists were familiar with the ecology of plants. Thus, the field of botany contributed to the understanding of man. Cross-fertilization does not always occur, however, when two separate fields come in contact. Ogburn and Nimkoff point

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[1]Ogburn and Nimkoff, op. cit., p. 509.

[2]Cf. supra, Chapter VI.

out the disadvantages of studying subject matter by separate disciplines in the following words:

> Cross-fertilization has long been recognized as a source of new ideas. Unfortunately, students sometimes keep the ideas they learn in sociology classes restricted to that field, and the ideas they learn in biology classes within the confines of that discipline. The departmental divisions in universities and colleges often erect barriers around each discipline which are a hindrance to the free flow of ideas from one subject to another.[1]

Diffusion is the mixing of ideas already in existence to bring about new inventions. This can be done, as already noted, through a mixing of various segments of a single culture. It also occurs through the mixing of diverse cultures. Much of the social heritage of early America came from England and other European countries. Some of the heritage of the American Indian was incorporated into the American culture through diffusion of the cultures. Many of the inventions in America are still aided by the cultures of other societies. The development of the automobile tire, as mentioned above, was based on several inventions which occurred in Great Britain as well as those which were developed in America. Much of the American culture is borrowed. The use of the potato and maize as types of food was borrowed from the American Indian. Rubeer for tires and overshoes and

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[1]Ogburn and Nimkoff, op. cit., pp. 509-10.

various other uses was discovered by Central American Indians. Wool from sheep, which were domesticated first in the Near East, also is widely used in the American culture.[1] Countless cultural items have been borrowed from every part of the world and incorporated into the American way of life.

A culture can diffuse only if it comes in contact with another. Therefore, isolation is a definite deterrent to cultural change. Some people living in remote areas like the Ozarks or the Appalachian Mountains live in a culture similar to that of the larger culture generations ago. Many of the groups are comprised of families that produce practically everything which they consume. Specialization and division of labor have not become a part of their way of life. These people may be progressing--that is, their culture may be accumulating--but it is accumulating at a much slower rate than that of the larger culture. This lag is due primarily to isolation.[2]

Many inventions are repressed and have no influence on the social structure. The repression may be deliberate or it may be accidental. In the case of deliberate repression,

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[1]See Ralph Linton, The Study of Man (New York: D. Appleton-Century Company, 1936), pp. 326-27.

[2]Ogburn and Nimkoff, op. cit., pp. 510-12.

manufacturers frequently will purchase the patents on those articles which might be detrimental to the sale of their own products. Repression of cultural ideas may occur because of lack of understanding by the majority of the people. For years the idea that the world is round was scoffed at before it was finally accepted as a truth. Robert Fulton's invention of the steamboat did not escape the ridicule of the general public of his day. The zipper was invented some 25 years before it was accepted for common use. No doubt, thousands of valuable inventions have been ignored or repressed deliberately. Even inventions which gain quick acceptance usually have a relatively long trial period before they are commonly accepted. This phenomenon has been called cultural lag. Although many of the informed members of society may be cognizant of an invention and its imperative need for application, the society as a whole must be given time to see and to understand the need for the invention before it will be accepted fully.[1] Thus, cultural diffusion and technological innovation may be delayed or resisted through the phenomenon of cultural lag.

In some cases, tradition causes change in the culture of one group as it comes in contant with an alien

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[1]Rose, op. cit., pp. 337-38.

culture. The tradition usually is altered by both groups as it diffuses into a new cultural item. Social change also may occur through social disorganization. People come in contact with other cultures or other segments within the same culture; the conflicting cultural values may bring about social disorganization of previously stable values. People who have become confused because of coming in contact with many divergent ideas and values are more willing to accept a change. People who are placed in other cultures and constantly find it necessary to reappraise their own cultural values become more willing to accept new ideas and new ways of life. Hence their own culture or sub-culture disorganizes and gives way to change.[1]

Culture evolved through contact with other cultures does not necessarily change in the direction of the culture with which it comes in contact. Similarity need not occur. It is quite possible that contact with another culture may cause value changes even more widely opposed than those which existed before the contact. However, similarity is more likely to occur, as was pointed out by Homans in his book, The Human Group.[2] Many illustrations of this point

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[1] Ibid., p. 344.

[2] George C. Homans, The Human Group (New York: Harcourt, Brace and Company, 1950), pp. 112-13, 133.

might be cited. A striking case occurred when American Navy units were sent to Port Barrow, Alaska, one of the northernmost inhabited spots of the world. When the Eskimos first were employed by the Navy, they still were living in a culture similar to the stone age. From earthen huts they moved into modern settlements of homes patterned after the American tradition. After the Navy moved away from Port Barrow, the Eskimo community, which had more than doubled during the time that the Navy was there, had to devise a way of maintaining the culture which had become theirs. There was no desire to give up what they had gained. It had become a way of life and the return to the former way was unthinkable. To solve their problem, the Eskimos subscribed money to build modern restaurants, hotels, motion picture theatres, and other tourist facilities. They promoted the notion that Port Barrow was an important and beautiful place for tourists to visit during the summer months. In this way they were able to develop a tourist trade which was supplemented by hunting and by their primitive crafts which were sold for cash purchases during the summer months. Thus, it was possible for them to maintain a culture which was not American and yet not the same as the one they had known previously.[1]

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[1]Rose, op. cit., p. 345.

Cultural conflict may develop through the diffusion of cultures. From this conflict cultural change may develop. The behavior of the children of an immigrant family illustrates cultural change stemming from conflict. In the home, the children must live according to the culture of the home country in which their parents were born and lived their young lives. In the school world and the society of their peers, they have to adhere to a completely different set of behavioral norms. The two cultures are usually conflicting in many aspects. Consequently, the children create special patterns of life which are not truly compatible with either of the other two cultures. These marginal people have contributed disproportionately to the change of the society into which they move as adults.[1]

Cultural integration or diffusion occurs at various levels. The national, community, and family levels are just three of an infinite number of levels. Any aspect of culture, such as the economic, social, political, or religious, may be viewed differently by the same person as he lives in each of the social levels. On the family level his interest may include aspects of a social phenomenon different from those he feels as a member of the community or of the nation.

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[1] Ibid., pp. 346-47.

For example, an individual may view his role in the family a certain way. The community may require his participation in such a way that he cannot maintain the role in the family as he sees it. The community participation may cause him to spend less time than he desires with his children. It may require his working many evenings, even though his value of family life would tend to pull him toward the family circle. His work or community participation may occupy a higher status in the values of the individual. Cultural change, therefore, occurs at various levels as these levels interchange or cross in the everyday life of the individual.[1]

Exponential Development

Cultural change develops very slowly at first and continues to accumulate in increasing amounts. The development of culture was very slow in prehistoric times. As mentioned earlier, it was possible to relate greater portions of the culture to the young after man developed the use of symbols. Thus, the accumulation of culture was much like the curve known as the exponential curve. About the simplest example of development of this type of curve is illustrated

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[1]Julian H. Steward, Theory of Cultural Change (Urbana: University of Illinois Press, 1955), pp. 43-63.

by the interest which is added annually to a given amount of money. Suppose the sum of $100 draws interest at 5 percent annually. The interest after the first year would bring the total sum to $105. At the end of the second year the interest would bring the total to $110.25. At the end of the third year the total sum would be $115.75. Thus the interest paid on the interest which already has been added to the total continually makes the sum grow at a more rapid pace each year. At the end of 100 years the interest added is around $1,000 a year instead of the $5 which was added the first year. Culture varies in a similar manner; the exponential curve is an approximation of cultural accumulation. It is only an approximation because the cultural accumulation may have features which cause the rate to fluctuate. Furthermore, not all inventions carry the same degree of change. Some inventions, such as the electric light bulb, may have a considerably greater effect upon society than the invention of, for instance, a filing cabinet.[1]

The rate of change is affected not only by the existing cultural traits but also by other features of the society. The invention of new cultural traits is not merely a reply to or a result of necessity. Man needed medical knowledge long before it was developed. Man today has the need for

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[1] Ogburn and Nimkoff, op. cit., pp. 512-18.

further development in the field of heart surgery and methods of combating the effects of old age. He has been seeking cures for cancer, diabetes, and many other diseases for a long time. They have yet to be found. The necessity is there; the demand is growing. Demand, more than necessity, spurs invention. The recent rise in the number of mathematics courses offered in the public schools and the increase in all branches of science offered in the public schools and in the earlier years of college certainly reflect the demand which the American people are making upon the schools since the nation has openly entered the race to conquer space. The cultural base upon which inventions may draw today is extremely large. Prolific invention may well take place without the demands which are made by society. However, when the cultural base is large and the demand is high, invention and cultural change occur rapidly.[1]

The accumulative rate of social change may be accelerated, in a sense, by the multiple influences of any one cultural change. The development of television, for an example, certainly has had an effect on recreation and entertainment. It has had an effect on transportation and education. Its many educational programs are reaching wider

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[1] Ibid., pp. 518-19.

audiences. Television has affected religion. It has created new occupations. It has affected industry and business. The production of television sets, the demand for portable ones, for color, and infinite internal requirements have had their effect on industry. Television has affected other inventions; for example, it has influenced the motion picture industry. It has affected political campaigns, transportation, protective forces in the community. In short, television has affected to some extent most of the aspects of the culture.

Not all inventions have a divergent influence. Some are the result of a convergent aspect. For example, the birth rate may be affected by the factory system, the school, the apartment house, the automobile, television, and the consumer economy. Each of these inventions has a very minimal effect on the birth rate; however, the combined effect may be extensive. The combined influences of multiple inventions are a common feature of highly advanced cultures.[1]

The Individual and Social Change

In the theories of social change which have been proposed by various sociologists, the individual generally

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[1] Ibid., p. 541.

has been ignored. The social changes which interested the theorists have been changes of a broad nature. They have been, in the main, trends significant to societal development of culture. All of the theorists would be sure to recognize the importance of the individual as a vehicle for creating social change, since all cultural changes are the manifestations of human activity. Earlier it was stated that change is inevitable. The development of the notion of inevitability, no doubt, has occurred through the use of hindsight. The theorists, in developing their ideas concerning cultural change, must rely, in part, upon their own experiences. Thus, theory is in itself an item of the culture evolving from the cultural items which presently exist. If, in 1975, one were to read a history book, he would be able to see logically the events that had occurred in 1962 or 1963, because the intervening years would by then be history. The theorist has experienced the activity already and has had the opportunity to synthesize the items of culture and the activity into a rationale.

What is the place or position of the individual in the process of cultural change? Ogburn says that "man appears to be master in the particular use he makes of the mcahine, but he seems not to be able to control the

derivative results of its creation and manufacture."[1] In other words, man can decide how he will use a machine, but he has difficulty in controlling the multiple adaptations which eventually will be made of the machine. In the development of aircraft, man was able to locate and to manipulate the existing cultural traits in order to create the new cultural item, the airplane. Once the airplane had been used and accepted into man's way of life, however, there seemed to be less control over the use of it. The inventors of the airplane probably had no notion that it would be adapted to warfare, dropping of bombs, and strafing of villages.

In the theory of social change, it may seem that man has no choice in effecting the change in the culture. This is an erroneous notion, because the individual always seems to have a choice. In theory the social forces are evaluated in their perspective, and thereby the consciousness of choice on the part of the individual is overlooked. In the social change that caused the decline in the home functions of a woman and an increase in her participation in the labor force, each woman had to decide whether or not she, in her situation, could give up the functions which she had been

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[1]William F. Ogburn, The Social Effects of Creation (New York: Houghton Mifflin Companu, 1946), p. 9.

performing and enter the labor force. However, decisions of this type evolved slowly. In many cases, the woman did not give up home functions. She did not leave the home and work in industry, but her values changed sufficiently to influence the behavior of her daughter. The daughter could accept the notion of keeping house and working either part time or full time in an occupation outside of the home.

The individual is frequently very instrumental in promoting rapid cultural change. Key persons may have decisions to make which affect a large number of their subordinates. A few persons engaged in collective bargaining may make decisions which affect the home life of thousands of employees. For example, many industrial contracts include provisions for retirement, for accident insurance, and for stock dividends. The family may not have to scrape and save as they did previously to provide themselves with a secure future. The husband may be able to plan more significantly activities for the family within his working budget without worrying about his accidental injury or death. Thus, the decisions of a few persons at the bargaining table may affect the lives of many thousands of people who do not work directly for the company but are members of the workers' families. The decision made by an individual or a small group of persons is not a simple matter. No one specific

item in the culture usually controls a decision. Most decisions have a many-faceted origin. Through his experience with the existing items in the culture, the individual relates all of his experiences and reacts in a way which is most intelligent to him in a particular situation. In other words, the behavior of any individual is the best that he knows under the circumstances at any particular time.[1]

Other Theories of Social Change

Many theories have been presented to explain the growth patterns of various cultures. A theory based upon the psychological factor of growth of civilization has been proposed by Toynbee.[2] The environment is a challenge to individual decision. Many individuals reply or respond to the environment in a constructive manner. In this theory of cultural change, the moral qualities of the society are of great importance. Decisions by individuals will be made on the basis of existing culture and what is right for that society. Sorokin has proposed a theory of cyclical cultural change

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[1]See Rose, op. cit., pp. 364-65, and Donald Snygg and Arthur Combs, Individual Behavior (New York: Harper and Brothers, 1949), passim.

[2]Arnold J. Toynbee, A Study of History (New York: Oxford University Press, 1946).

based upon empirical data.[1] He sees an alternation of two principles: the pursuit of sensual goals and the pursuit of spiritual goals. From his historical analyses, the two different prusuits occur in cyclical order. A theory emphasizing the economic factors in the growth of culture has been proposed by Brooks Adams.[2] Some geographers and biologists have attempted to explain cultural change as a result of climatic conditions or as a result of differential birth rate and racial intermarriage among various societies. Some theories of social change have seen change as an inherent feature in the nature of man: that man, because of his biological composition, is a natural seeker of new things.[3]

Since most theories of cultural change are derived from empirical bases, it is apparent that they are in themselves merely logical assumptions based on existing cultural items. Because it is impossible for the theorist to foresee the effects of any change in the culture, the theories are based upon what the authors feel are sufficient reasons to

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[1]Pitirim A. Sorokin, Society, Culture and Personality (New York: Harper and Brothers, 1947).

[2]Brooks Adams, The Law of Civilization and Decay (New York: Alfred A. Knopf, 1943).

[3]Ogburn and Nimkoff, op. cit., p. 524 and Rose, op. cit., pp. 334-35.

create a logical pattern. Thus, in searching for causes of change in any society, the student of sociology must be content with logical proposals based upon the existing cultural features.

Social Change and the Industrial Arts Program

The analysis of social and cultural change in the United States reveals many facts pertinent to education and the industrial arts program. Ten of the most salient items have been selected for discussion.

1. Innovations--both material and nonmaterial--evolve from an existing culture.

2. The individual, through his experiences, reacts to an existing situation and thereby causes change.

3. Since man has developed language and other symbols, culture is not lost readily.

Social change occurs because of changes in the culture of a group of people. The innovations which occur in the culture of a society must evolve from the existing culture. Frequently, change is deliberate, the result of conscious efforts to create or to change items in the culture. In other cases, change evolves from action which is not seeking change consciously. Since culture is not lost

easily, the cultural base upon which society rests at any one time is extremely large. The industrial arts program must help students to understand the role of industry in changing the culture of society. Industry, through its research and experimental laboratories, makes direct efforts to create new items of culture from the existing culture. Changes in the industrial economy[1] and in industrial organization[2] must be studied by the industrial arts pupils in order to foster an understanding of nonmaterial innovations of industry.

4. Cultural change may be a continuous refinement process.

5. Cultural change may evolve through the process of diffusion.

6. When two cultures change as a result of contact, they are likely to become more alike, even though they remain distinctively different.

7. Cultural items develop because of need and demand.

Cultural change occurs in many ways. Frequently, cultural items are created by the refinement process. Industry

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[1]Cf. supra, pp. 266-73.

[2]Cf. supra, pp. 204-209.

uses the refinement process extensively. Engineers experiment with existing items to refine them and to make minor changes. Various items may be combined to form new items. Similarly, cultural items from various societies or subgroups may be combined to produce new items. Industry may move to a new part of the nation or, as was the case during World War II, workers may move from one area to another to work in industry, taking items from their subculture with them. Items may be needed by the society for many years before the demand becomes great enough to cause the concentration of effort to bring about an innovation. Today industry maintains large research staffs that seek to understand the needs of society and to meet its demands. The industrial arts program must foster an understanding of cultural innovation. It must help students to understand the major role which industry plays in changing the existing culture.

8. Inventions usually have a long trial period before acceptance becomes universal.

9. Cultural change occurs in a pattern similar to an exponential curve.

10. Inventions usually have multiple influences on the behavior of society.

Because cultural innovations evolve from the existing culture, the change takes a form similar to an exponential

curve. As the culture becomes larger, there are many more items upon which to base more changes; change becomes progressively more abundant. However, newly created items are seldom accepted immediately; there is a cultural lag. Society must become acquainted with the change before it can accept it. Industry may hasten the acceptance of an item through extensive advertising. As a new cultural item penetrates the society, its influence on behavior patterns increases. Through specialization and division of labor, the industrial production of the item involves the activities of many individuals. Depending upon the item, its use in society may affect the behavior of many individuals. The industrial arts program must help students to learn how industrial items are developed from the existing culture. It must help them to understand the manifold influences items may have on the behavior of individuals and groups in the society. It must foster an understanding of the interrelatedness of cultural and social change.

Because innovations evolve from the existing culture, because individual reaction to existing situations causes change, and because culture is not lost readily, the industrial arts program must help students to understand the role of industry in the process of social and cultural change. Because cultural change can be a continuous process, because

it may evolve through diffusion, because diffused items cause change in behavior in both groups, and because cultural items develop because of need and demand, the industrial arts program must help students to understand the efforts of industry in seeking the needs and in meeting the demands which society has for new cultural items. Because cultural lag exists, because change occurs in a pattern similar to an exponential curve, and because cultural items influence behavior in manifold ways, the industrial arts program must help students to understand how industry combats cultural lag and seeks to influence efficaciously the behavior of society with respect to the cultural items it develops.

CHAPTER XV

INDUSTRIAL ARTS EDUCATION AND THE NATURE OF SOCIETY

The purpose of this study has been to propose a conceptual basis for developing an industrial arts program. The major hypothesis is that the bases of the industrial arts program are sociological rather than narrowly technological. The implied assumption is that heretofore the industrial arts program has been based mainly upon technological considerations with little, if any, emphasis upon the sociological.

Data have been gathered through analysis of the five elements of society used widely by sociologists in the study of society: demography, including composition of the population, fertility and mortality, and migration; social morphology, including ecology, groupness, and stratification; social processes, including cooperation and opposition, social adjustment, and social mobility; social institutions, including the family and education; and social change, its nature and effects. The sources of data have been, in the main, the major writings of widely accepted authorities in each of the areas. From the analysis, significant facts have been pointed

out and their implications for industrial arts education indicated. Criteria for the selection of the facts are conditions and situations which have changed (1) the behavior and structure of groups and (2) a portion of the culture. The implications have been synthesized into guiding principles for the development of an industrial arts program consonant with the sociological bases upon which it must rest.

Support of the Hypothesis

Industry is a social institution, an organization of men for the production of goods and services.[1] The institution of industry is a cultural item. Cultural items, being products of society, affect the behavior of the members of society. Innovations in the culture are based upon the existing culture and occur through both deliberate and indirect efforts of man.[2] Whether or not change in the culture is a result of conscious effort, it affects human behavior. Since industry deliberately seeks to change the culture, it actively changes society.

The cultural base of a society can grow prolifically as it has in the United States only through specialization

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[1] Cf. supra, p. 208.

[2] Cf. supra, Chapter XIV.

and division of labor.[1] The culture is so large that no one can comprehend it in its entirety. Specialization permits advancement of the various segments of the culture and allows members of society to assimilate a constantly expanding culture. Industry and the industrial economy are cultural developments designed to advance the culture and to distribute its fruits among the members of society. Thus, the advanced industrial culture structurally demands a high level of interrelatedness among the members and institutions of society.[2]

When the culture of society became too complex to be transmitted to future generations through direct participation, the institution of formal education evolved. It is through this institution that selected beliefs, values, and behavioral patterns are consciously transmitted to the young.[3] It is the function of formal education to transmit those segments of the culture deemed important by society. There is by no means agreement as to which cultural items are important and should be transmitted. Nonetheless the school, with the help of the parents, has the task of

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[1]Cf. supra, pp. 428-32.

[2]Cf. supra, pp. 428-41.

[3]Cf. supra, p. 394.

selecting the cultural items to be transmitted. Since the selection is based upon what society deems important, educators must make analyses of the society to ascertain which segments of the culture are most beneficial to the over-all society.[1]

Guiding Principles for Industrial Arts Education

The members of society are relatively uninformed about industry and its influences on society. They know its many products but are unaware of their construction and widespread effect. They are relatively uninformed in matters of industrial structure and the industrial economic system. The industrial arts program, as part of the formal education system, must provide students with experiences which foster an understanding of industry as a social institution. Although many leaders in the field of industrial arts have envisioned the task of fostering an understanding of industry and industrial relationships, few programs have gone beyond the study of tools and hand craftsmanship.

From the sociological analysis of American society presented in this study, various facts were selected as the

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[1]Cf. supra, p. 421.

most salient points of the analysis.[1] From these significant facts and their implications for the industrial arts program, certain guiding principles have been formulated. The principles are of two distinct types: (1) those which help to clarify the role of industrial arts in the general education program and (2) those which guide the subject matter content as a field of specialization.

Industrial Arts and General Education

Industrial arts education must be available to all students in secondary schools regardless of race, sex, color, or place of residence.

The need for universal understanding of industry is well demonstrated throughout the analysis. The children of the nation are disproportionately numerous in rural areas, but as young adults large numbers of them move to the industrial urban areas. The mountainous and remote regions of the nation also have high proportions of the nation's youth.[2] Because of the decentralized educational system, these rural and remote regions frequently have inadequate resources and facilities for offering a comprehensive program in their secondary schools.

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[1] Cf. concluding sections of Chapters III-XIV.

[2] Cf. supra, pp. 30-33.

The Negro and other nonwhite races are disproportionately found in slum areas of the nation. In industry, they are restricted almost always to lower class occupations.[1] Negroes and Mexicans are predominant among migratory workers.[2] Birth rates and death rates for the nonwhite population are higher than for the white population. The family life differs considerably between white and nonwhite.[3] If the nation is to respect nonwhite persons as capable human beings, the industrial arts program must help them to develop to their fullest capacities in society.

Few girls in the nation have the opportunity to receive industrial arts education, yet industry employs large numbers of women in the labor force. However, women are concentrated in a few occupations which they dominate almost completely. Few women are found in supervisory positions, except in those occupations in which they are concentrated.[4] Some occupations bar women from their ranks because of the heavy physical work required, but in most cases their exclusion is arbitrary.

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[1] Cf. supra, pp. 58-62.

[2] Cf. supra, pp. 131-38.

[3] Cf. supra, pp. 375-78.

[4] Cf. supra, pp. 239-40.

Universal industrial arts education, if its sociological foundations were considered, would foster an understanding of industry among all segments of the population. It would help to develop the skills of those who eventually will be working in industry. It would help all young people to become more conversant with the social institution about which much of society functions.

The industrial arts program must help young people to become more communicative in the realm of industry.

Many aspects of the analysis point toward the need for members of society to be able to communicate ideas and values to one another. People are living more closely together today than formerly. Industry has caused the population of the United States to aggregate in highly industrial metropolitan areas.[1] Within the large groups are numerous smaller groups that intermingle and overlap. Each group has features of solidarity based on both likenesses and differences. Industrial groups are based primarily upon differences.[2] Each group must interact with other groups and must communicate to them its special functions.

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[1] Cf. supra, p. 30.

[2] Cf. supra, pp. 204-209.

The social processes of society are based upon communication. Cooperative efforts are possible only if all members of a group perceive a goal as beneficial to each member. Many cooperative efforts are based upon specialization; each member must communicate to others the contributions and interrelatedness of his specialty. Similarly, in competitive situations, the goal must be understood by each member; otherwise, the goal ceases to be important and conflict ensues. Accomodation depends upon communication between conflicting groups or persons. In industry, labor and management negotiate to reach agreements upon which they can operate for a period of time.[1] Each side must help the other to understand its point of view; each side must communicate so well that the other side shares its experiences through the symbols of language. Such communication is necessary in the process of assimilation. The experiences of each group must be understood so well that the ideas and values of the two groups integrate into one.[2]

Social institutions cannot function without communication. The family begins the process of socialization of its young; it communicates the ideas, values, and behavioral

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[1] cf. supra, pp. 305-308.

[2] cf. supra, pp. 296-98.

patterns which are compatible with the child's sex, age, and social status.[1] The entire function of the school is one of communication. The schools must communicate through direct and symbolic experiences those segments of the culture which must be perpetuated.[2] Industry is composed of many groups. The productive ability of an industry is highly dependent upon the communication among its various groups.[3] Industry has to communicate with other industries and organizations to obtain materials, to ship products, and to receive power. The entire process of marketing the goods or services is largely one of communicating the need to the public.

The industrial arts program must function as part of the total guidance program of the school.

The rural portions of the nation have high birth rates and a disproportionately large number of the children of the nation. As young adults, large numbers of rural people move to urban areas to be employed by industry.[4] Today many young adults flounder from job to job in search

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[1]Cf. supra, pp. 369-71.

[2]Cf. supra, p. 396.

[3]Cf. supra, pp. 207-208.

[4]Cf. supra, pp. 53-58.

of the one which best satisfies them.[1] The schools must help these young people to know themselves and the occupations in which they may be employed.

Since society can function only in groups, students must learn to evaluate group goals and the functions of the members. They must be able to evaluate their roles as group members and to evaluate themselves in relation to the roles expected of them. As members of a social class, persons are expected to act in certain patterns. A person's occupation determines, to a great extent, his social status.[2] The industrial arts program must foster an understanding of the social and economic status of the various industrial occupations. In the competitive and cooperative functions of groups, individuals must be helped to evaluate accurately the goals toward which they strive. They must be helped to understand themselves in relation to the goals.

The schools must help the youth of the nation to discover their abilities and interests and to develop them fully. The industrial arts program must help young people to discover technical ability and interest. It must help them to

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[1]Cf. supra, p.350.

[2]Cf. supra, pp. 229-30.

[3]Cf. supra, pp. 281-82.

explore the various industries of society. It must help them to know the educational, physical, and personal requirements of many occupations.

The industrial arts program must foster an understanding of the interrelatedness of society.

The population of the United States is primarily urban. Each member of society depends upon others for certain necessities that he cannot provide for himself. The entire structure of society is interdependent, based upon the specialization of duties and functions. Rural and urban areas develop in definite spatial patterns as man interacts in the complex web of life.[1]

Within industry, specialization and division of labor create a web of relationships. The materials, tools, processes, and products influence the location and relations of an industry.[2] Moreover, the interrelatedness of life includes both the social and cultural interaction of man. Groups of people evolve from differences as well as from likenesses. When the culture of society is very large, specialization is necessary to expand the culture further.[3]

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[1] Cf. supra, Chapter VI.

[2] Cf. supra, pp. 171-81.

[3] Cf. supra, pp. 432-34.

The social processes also indicate the need for an understanding of the interrelatedness of life. Cooperation and opposition are processes of social striving toward goals. Whether the striving is with others or against them, the interaction is an integral part of the process.[1] Likewise, the accomodation of conflict is possible only if the two groups, through interaction, perceive the necessity for delaying the conflict.[2]

The schools not only must foster an understanding of the interrelatedness of life, but also must operate through it. The industrial arts program is interrelated with social sciences, language arts, mathematics, physical sciences, and other programs of the school. For example, in the study of industrial communications, the language arts experiences of the student facilitate his comprehension. Similarly, the processes of industrial production are based upon physical and chemical phenomena which the student learns in the physical sciences program. Hence, the industrial arts program through its interrelated position in the educational system is enabled to foster an understanding of the interrelatedness of industry.

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[1] Cf. supra, pp. 256-62.

[2] Cf. supra, p. 291.

Industrial Arts Specialization

The industrial arts program must help students to understand industry as a social institution.

Industry is a social organization for the production of goods and services. It has both a formal and an informal organization. The formal organization strictly defines the duties and relative positions of the workers; the informal organization may define status and authority much differently. The industrial arts students must be cognizant of both formal and informal organization and the functions of each.[1] The employees in the work plant are distributed not only by ability but also by arbitrary factors of placement. The students in the industrial arts program must learn of the spatial distribution of industry as a resulting pattern of the interaction between men of industry and their environment.[2]

Industry is a cooperative organization. Each worker contributes to the production, but he does not produce; the industry does.[3] At the same time, industry is a competitive

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[1]Cf. supra, pp. 204-13.

[2]Cf. supra, Chapter VI.

[3]Cf. supra, pp. 208-209.

organization. As part of the economy, industries may vie with one another for markets, materials, manpower, and prestige.[1] The social process of accommodation is an integral part of labor-management relations. Collective bargaining, conciliation, and arbitration are forms of accomodation which are widely used in industry.[2] Acculturation and assimilation are more highly attained in industry than in the larger community.[3] The industrial arts program must help students to understand the social processes of industry.

Industry as a social institution affects other institutions with which it interacts. Family life is affected by the worker's income and status. Industry may make demands on a worker's time and home life through entertaining.[4] Industry cooperates with the schools by supplying information in various forms. Frequently, it helps through scholarship programs. Industrial leaders expect the schools to help students to learn about industry.[5] Because industry is a social institution, it helps its members develop through

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[1]Cf. supra, pp. 266-73.

[2]Cf. supra, pp. 305-11.

[3]Cf. supra, pp. 313-18.

[4]Cf. supra, p. 382.

[5]Cf. supra, pp. 415-16.

formal education. Most large industries have courses which help the employees to learn and to develop, both as persons and as workers.[1]

The social institution of industry must be the central subject of the industrial arts program. Only when viewed as a social unit can the interrelatedness of industry be comprehended. The students must be able to learn of the social institution which so greatly affects the entire society.

The industrial arts program must help students to understand the tools, materials, processes, and products of industry.

The technical culture of industry is an important phase of the industrial arts program. Industry hires its personnel with respect to its technical culture. Each industry has a different composition of occupations.[2] Because of the product, material, or process, many industrial workers must be territorially mobile. Some are transient workers with no permanent home; others are mobile but maintain a permanent residence.[3]

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[1] Cf. supra, pp. 415-20.

[2] Cf. supra, pp. 46-48.

[3] Cf. supra, pp. 131-38.

The structure of industry is affected by its technical culture. Some industries must locate near transportation centers, some near the raw material, and still others near their market.[1] The structure of its buildings is affected by the machine tools, the processes, or the materials of the industry.

Industry causes many changes in the culture and behavior of society. Innovations in tools, materials, processes, and products constantly change the culture of society. The culture, in turn, changes the behavior of the members of society.[2] The study of the technical culture of industry is necessary to help students in the secondary schools to understand the industrial world which affects their society.

The industrial arts program must help students to understand the occupations of industry.

The technical culture of industry functions through human beings with a definite organization. The organization defines the duties and actions of workers in various groups or occupations. A person's occupation affects the location

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[1] Cf. supra, pp. 177-81.

[2] Cf. supra, Chapter XIV.

of his residence and the changes in residence which he makes.[1]

A person's occupation, perhaps more than any other factor, determines his social and economic status.[2] Hence, occupation determines the social as well as the physical placement of workers in the society. Through education and other avenues of social mobility, the individual may move to occupations which confer higher levels of prestige and status.[3]

The industrial arts program must help students to know the various occupations of industry. It must help them to know the educational requirements of the occupations. The students must be helped to know themselves and to determine the occupations for which they are best suited.

The industrial arts program must help students to understand industrial health and safety practices.

In a society dependent upon specialization and division of labor, the incapacitation of any member places additional burdens on others. Various private and public health

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[1]Cf. supra, pp. 128-31.

[2]Cf. supra, pp. 229-30.

[3]Cf. supra, pp. 329-35.

organizations help to establish healthful habits and safety practices among the population.[1]

Certain occupations have high death rates caused by occupational accidents. However, most occupations affect the life span of individual workers through deteriorating effects on the body.[2] Industry usually maintains health suites and first aid stations. Safety engineering has become an important aspect of industrial organization. Literature on both health and safety is often distributed by industry.[3]

Safety within the work plant is a concern of industry. The machine tools usually have guards to protect the worker whenever possible. The plant layout may be directly affected by the machines and areas of safety. Poisonous gases are removed as thoroughly as possible and proper ventilation is provided.[4]

Safety and health provisions are found frequently in labor contracts. Health insurance may be provided by the industry or provided through worker-industry cooperation.

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[1]Cf. supra, pp. 101-102.

[2]Cf. supra, p. 102.

[3]Cf. supra, p. 102.

[4]Cf. supra, p. 101.

The industrial arts program must help students to learn to handle all tools safely and to understand the need for sound health practices in working situations.

The industrial arts program must help students to understand industrial labor relations.

The analysis of the industrial population indicates the inequality of opportunity among the various segments. Many persons are barred from occupations by prejudice and discriminatory action.[1] The major unions in the nation have adopted policies of nondiscrimination.[2]

Workers in industry feel that they belong either to the house of labor or to the house of management.[3] Labor organizes to protect the rights of the worker. It negotiates with management to obtain fair wages and good working conditions. Management is dedicated to the organization. It must see that the organization remains solvent. Management must retain enough profit to avoid loss and to expand the productivity of the organization.[4] Thus, the two segments of industry have opposing experiences and values. The industrial

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[1] Cf. supra, pp. 350-51.

[2] Cf. supra, p. 312.

[3] Cf. supra, pp. 203-204.

[4] Cf. supra, p. 270.

arts program helps students to understand the values of both sides.

The industrial arts program must foster an understanding of the grievance procedures used in industry. It must help them to understand collective bargaining as the accepted procedure for negotiating labor contracts and the other methods used when collective bargaining fails.[1] The program must foster an understanding of the effects of labor disputes on the society and the necessity of governmental regulation or control.

The Industrial Arts Program

In conclusion, an industrial arts program must be flexible, based upon the dynamics of the society in which it functions. The program must center about a systematic study of industry as it exists at the time of the study. Such a program must have as its core subject matter which will help the student to grow in his understanding of the industrial segment of the society in which he lives. The subject matter of a comprehensive industrial study involves a constantly renewed body of factual material tempered by the philosophy and experience of the members participating in the study.

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[1] Cf. supra, pp. 305-11.

The ideology of the industrial plant and the objective data which portray the degree to which the industry adheres to it must be sought. Hence, the ethos of the industrial organization which reveals the participation of the industry's labor force must be understood.

The subject matter of a comprehensive industrial study must examine the structure of the industrial organization. Both the formal and the informal structure must be analyzed by the industrial arts class. The formal structure reveals the social organization of the entire personnel of the industry. Top management, superintendents, supervisors, foremen, and other managerial personnel; engineers, personnel directors, inspectors, and other staff personnel; shop stewards, skilled workmen, semi-skilled workmen, laborers, and other labor personnel are involved in the formal social structure of the industry. The interrelationships among groups of personnel--those who have authority and those who are subordinate--and in general the relationships which exist among all personnel must be studied by the class. The study of the informal structure (the work groups, the ball team, the cliques, the country club group, and the beer garden gang) should give the student a realistic view of the human members of which an industrial plant is composed. Labor unions and their formal and informal structures, which are

an integral part of industry's structure, must be studied, as must the channels of operation designed to function between labor and management.

The materials, tools, processes, and products of an industry comprise an important segment of a comprehensive analysis. All industry is organized to provide certain products for, or services to, the market. The products demanded by society regulate the various materials which are used. Tools, both hand and machine, are utilized along with the chemical, electrical, and mechanical processes functionally related to the production of the products or services. The study of products is, therefore, the basic portion of the comprehensive view of industry.

The functional relationships among the various groups within industry help the student of industrial arts to understand its internal structure. Industry has social influence which extends beyond the internal structure. Through its products, through its demand for labor, through its advertising and selling techniques, and through a host of other obvious and subtle ways, industry affects the society of which it is a part. The industry itself is an economic organization. It provides the livelihood for its employees; it provides a product or service which normally enters the economic market. Industrial arts, through a carefully

selected subject matter, must help the student to understand much of the industrial culture of the society in which he lives.

The function of industrial arts is not to prepare a student to participate in society at a future date. The student is a member of society today. The composition of his society--his home, his parents, and all of the people he knows--is affected by organized industry. Industrial arts education must help the student to participate rationally in his society.

Finally, the unique aspect of the industrial arts program is the activity through which the students pursue the subject matter. The laboratory is equipped with tools with which the student may engage in activities not possible in many other parts of the general education program. The pupils in an industrial arts class may work on individual or group projects which may take various forms. Often typical products of industry are constructed in industrial arts classes. Such products are produced by individuals or by groups--small groups or the whole class. Industrial products which are produced in the classroom should be typical of the industry being studied. Preferably they should be of such a nature as to guide the students into a full understanding of

the materials, tools, and processes which the industry uses to produce similar products.

In some cases, the class may work as a small industry to mass produce several products of the industry. The structure of the class may be patterned after that of the industry being studied. The class may have its managerial force, its engineers, and its salesmen, as well as its production lines along which the product is formed and assembled.

Models of industrial plants, of typical machine tools, of the internal structure of a building, or of industrial features such as a furnace can be produced by groups of students. Such models frequently illustrate both the structure and the processes in which the industry must engage in order to manufacture its products for the market. Similarly, charts and graphs, maps, and various graphic representations of the structure and functions of the industry may be used by the class as media of learning.

The activities portion of the industrial arts program also may include field trips to industrial plants so that the students may view first hand various aspects of the industrial structure, materials, tools, processes, and products. On such trips the students may observe many of the social functions and the relationships among workers in the work plant. Talks by members of industry may relate to the

students in the industrial arts class significant experiences in their fields of industrial specialization. Guest speakers from industry and the community may be used to broaden the students' experience. Motion pictures help the student to obtain a more realistic view than is possible through language alone. The student sees various portions of the industry while it is being explained in the motion picture. The industrial arts instructor may supplement his talks by the use of film strips and pictures of industry.

Experimentation with various industrial processes, materials, tools, and products allows the industrial arts student to ascertain first hand the basic principles involved. For example, a student who machines material with various tools different from those in the recommended specifications may establish for himself reasons for the recommended specifications to which the tool and process must adhere.

The activities of the industrial arts program serve as media of learning. However, the student must participate mentally in the situation before he is able to comprehend the segments of the culture which are a part of the learning situation. Thus the industrial arts program may provide through its activities situations in which the student may become involved mentally and emotionally. The pupils of

the industrial arts program thereby may engage in the activities as media for rational pursuit of segments of the culture of the industrial plant unknown to them.

Recommendation for Further Study

The foregoing analysis has presented an extended illustration of how implications and guiding principles for industrial arts education may be derived from the study of society. The study has been limited to a sociological analysis and has made little reference to social psychology. A psychological analysis of the population and industrial patterns of behavior would be necessary to acquire a complete foundation upon which to base the industrial arts program. It is recommended, therefore, that such a study be made. The research techniques should be guided by approved analytical procedures used in the field of social psychology.

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BIOGRAPHICAL SKETCH

William A. Wockenfuss was born in Baltimore, Maryland, August 4, 1925. After graduation from Baltimore Polytechnic Institute, he worked for Western Electric Company as an electrical inspector. He entered the U. S. Army Air Corps in February, 1944, and served as an electrician-mechanic-gunner until April, 1946.

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This dissertation was prepared under the direction of the chairmen of the candidate's supervisory committee and has been approved by all members of that committee. It was submitted to the Dean of the College of Education and to the Graduate Council, and was approved as partial fulfillment of the requirements for the degree of Doctor of Education.

August 13, 1960

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